

TC-WR745S/WR801ES

SERVICE MANUAL

*US Model
Canadian Model*

TC-WR801ES

AEP Model

E Model

Australian Model

TC-WR745S



Photo : TC-WR801ES

* Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

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Model Name Using Similar Mechanism	TC-WR645S	
Tape Transport Mechanism Type	DECK A	
	DECK B	TCM-190RB12C7

SPECIFICATIONS

Recording system	4-track 2-channel stereo		
Fast winding time	Approx. 90 sec. (with Sony C-60 cassette)		
Bias	AC bias		
Signal-to-noise ratio (at peak level and weighted)			
Cassette (Dolby NR OFF)	Type IV	Type II	Type I
	58 dB	57 dB	55 dB

S/N ratio improvement (approximate values)
with Dolby B NR on: 5 dB at 1 kHz; 10 dB at 5 kHz
with Dolby C NR on: 15 dB at 500 Hz; 20 dB at 1 kHz
with Dolby S NR on: 10 dB at 100 Hz; 24 dB at 1 kHz

Harmonic distortion
0.4 % (with Sony Type I, 160 nWb/m, 315 Hz,
3rd H.D.)
1.8 % (with Sony Type IV, 250 nWb/m,
315 Hz, 3rd H.D.)

Frequency response (Dolby NR OFF)

Type IV cassette	30 - 18,000 Hz (± 3 dB, IEC) 30 - 13,000 Hz [± 3 dB (-4 dB) recording]
Type II cassette	30 - 17,000 Hz (± 3 dB, IEC)
Type I cassette	30 - 15,000 Hz (± 3 dB, IEC)

Type IV: Sony Type IV (METAL)
Type II: Sony Type II (HIGH)
Type I: Sony Type I (NORMAL)

Wow and flutter
 ± 0.13 % W.Peak (IEC)
0.07 % W.RMS (NAB)
 ± 0.18 % W.Peak (DIN)

Inputs

Line inputs (phono jacks)	Sensitivity	0.16 V
	Input impedance	47 k ohms

Outputs

Line outputs (phono jacks)	Rated output level	0.5 V at a load impedance of 47 k ohms
	Load impedance	Over 10 k ohms
Headphones (stereo phone jack)	Output level	1 mW at a load impedance of 32 ohms

General

Power requirements

US, Canadian model : 120V AC, 60Hz
AEP, German model : 220-230V AC, 50/60Hz
E model : 120, 220 or 240V AC adjustable, 50/60Hz
Australian model : 240V AC, 50/60Hz

Power consumption

30 W

Dimensions
Approx. 430 x 123 x 290 mm (w/h/d)
(17 x 4 7/8 x 11 1/2 inches) including projecting parts and controls

Mass

Approx. 4.5 kg (9 lbs 15 oz)

Supplied accessories

Audio connecting cords (2)

Remote commander RM-J903 (Canadian model only)

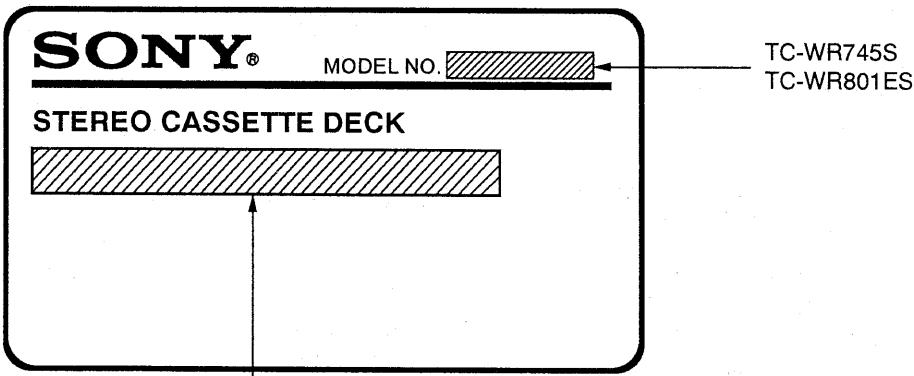
Design and specifications subject to change without notice.

STEREO CASSETTE DECK
SONY®

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MODEL IDENTIFICATION
(Specification Label)



US, Canadian model : AC 120V 60Hz
 Australian model : AC 240V~50/60Hz
 AEP, German model : AC 220-230V~50/60Hz
 E model : AC120, 220, 240V~50/60Hz

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

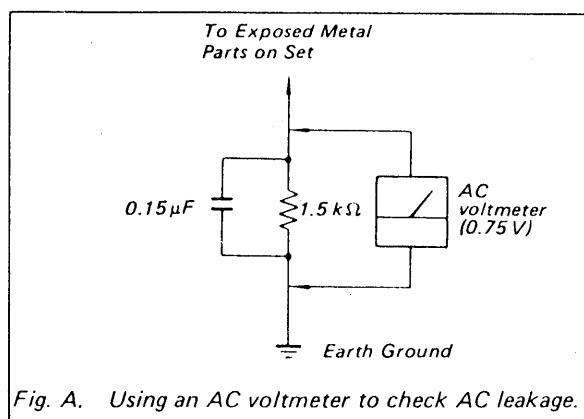


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

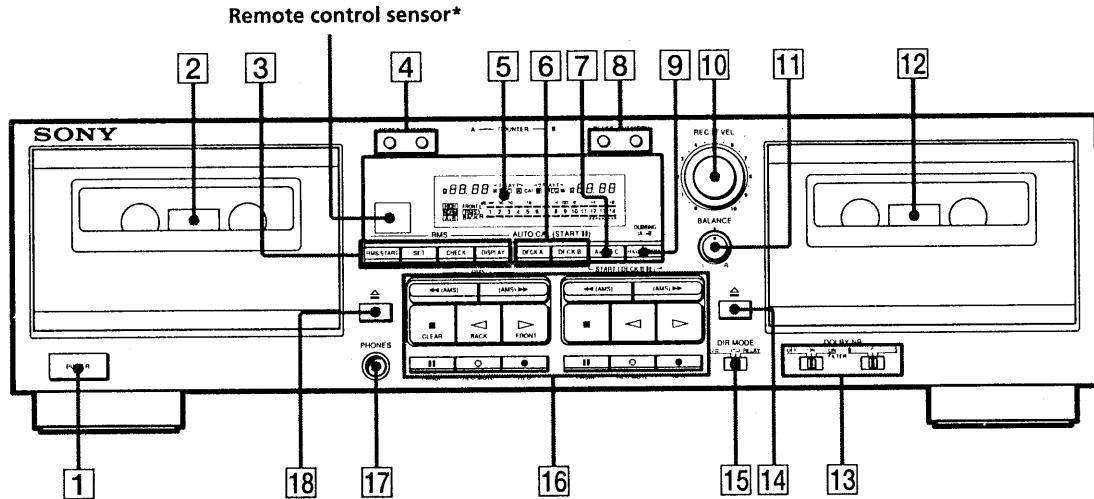
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE \triangle SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL

This section is extracted from instruction manual.

1-1. IDENTIFYING THE PARTS



For details, refer to the page number(s) indicated in parentheses.

- | | |
|--|---|
| [1] POWER switch | [12] Deck B |
| [2] Deck A | [13] DOLBY NR switches |
| [3] RMS** operation buttons | OFF/ON/FILTER ON switch |
| RMS/START button | B/C/S switch |
| SET button | [14] ▲ (eject) button (deck B) |
| CHECK button | [15] DIR (direction) MODE switch |
| DISPLAY button | [16] Tape operation buttons |
| [4] COUNTER buttons (deck A) | ◀◀ (leftward fastwinding)/AMS***/RMS**- button |
| RESET button | ▶▶ (rightward fastwinding)/AMS***/RMS**+ button |
| MEMORY button | ■ (stop)/(RMS**) CLEAR button |
| [5] Display panel | ◀ (reverse play)/(RMS**) BACK button |
| [6] AUTO CAL DECK A and DECK B buttons | ▶ (forward play)/(RMS**) FRONT button |
| [7] A+B REC button | ■ PAUSE button |
| [8] COUNTER buttons (deck B) | ○ REC MUTE (record muting) button |
| RESET button | ● REC (recording) button |
| MEMORY button | [17] PHONES jack (stereo phone jack) |
| [9] DUBBING HIGH/NORM button | [18] ▲ (eject) button (deck A) |
| SYNCHRO DUBBING buttons | |
| HIGH button | |
| [10] REC (recording) LEVEL control | |
| [11] BALANCE control | |

* Remote control sensor

You can remotely control this cassette deck with:

- A remote commander that came with a Sony amplifier or receiver if it has the  mark and cassette deck control capability.
- Any optional Sony remote commander with the  mark and cassette deck control capability.

** Random Music Sensor

*** Automatic Music Sensor

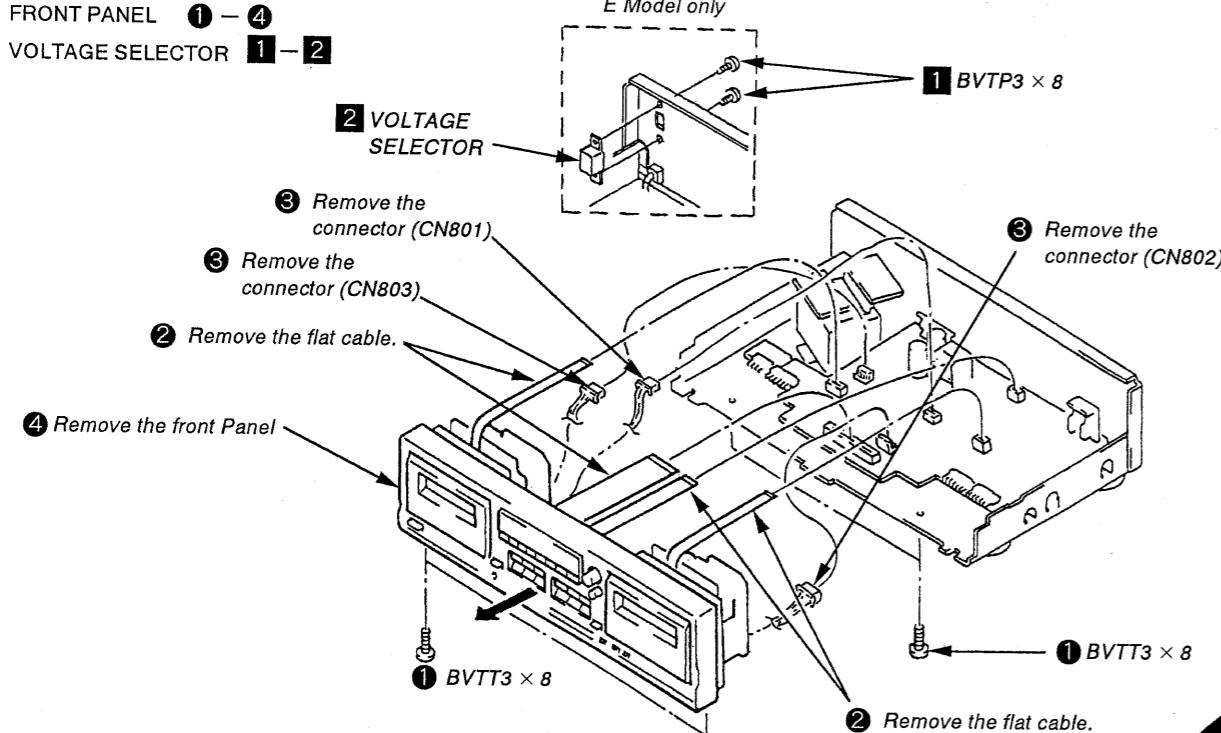
SECTION 2 DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

CASE

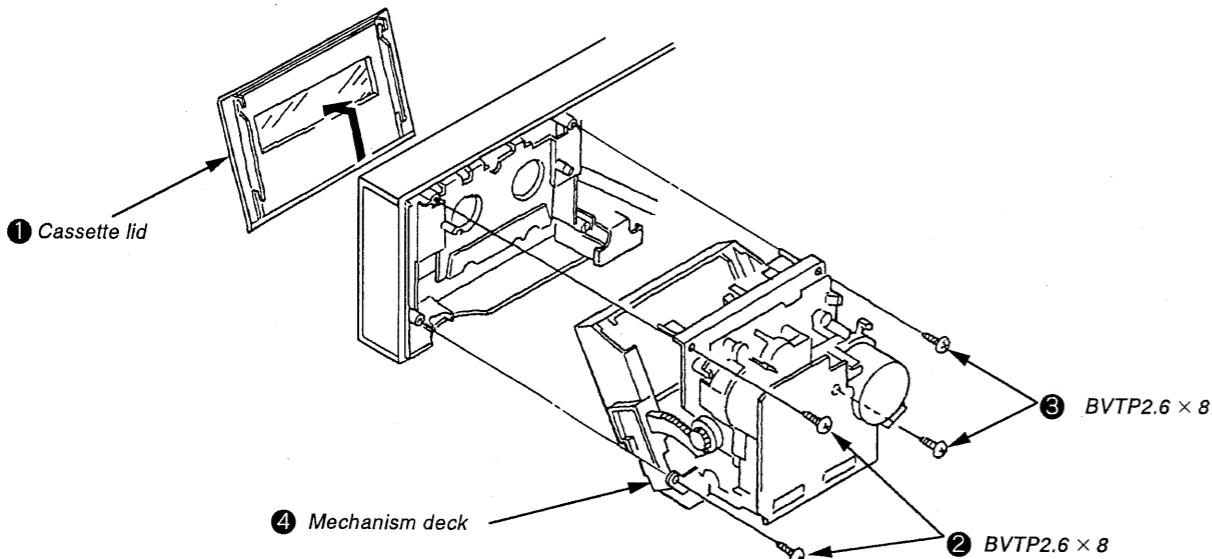
Unscrew the four case attachment screws M3 × 8 and remove the case.

2-1. FRONT PANEL

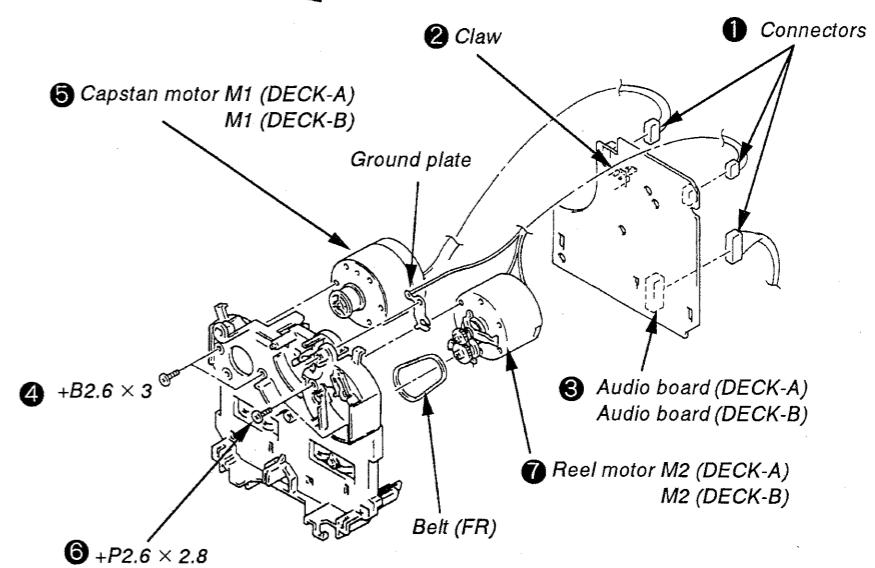
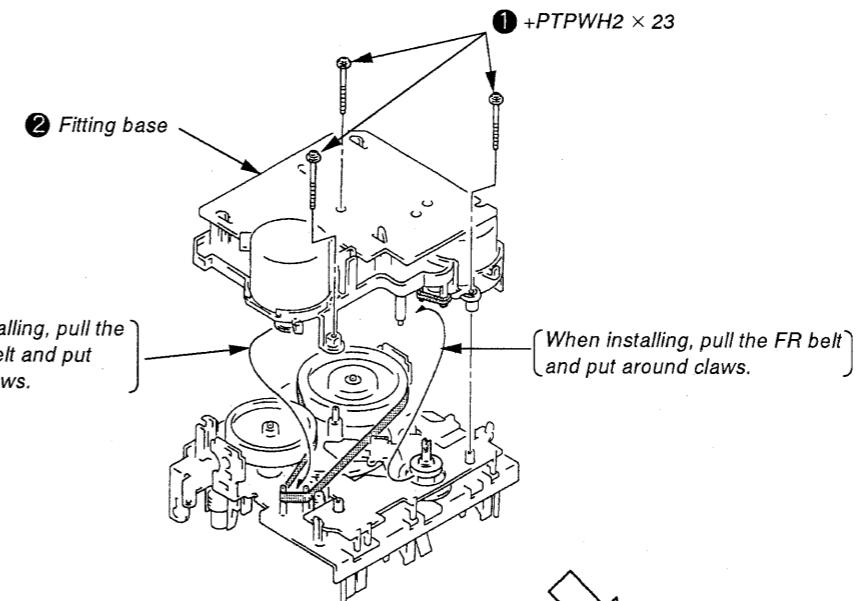


2-2. MECHANISM DECK

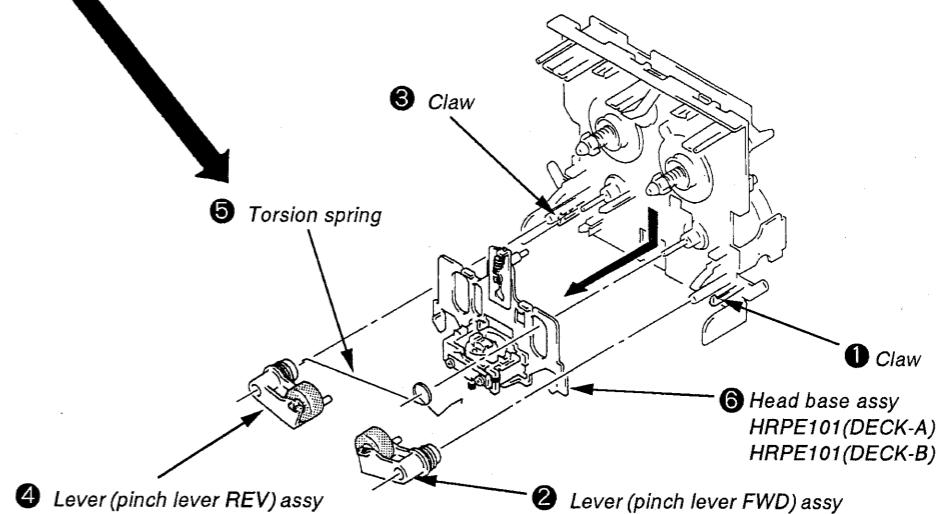
① Press the EJECT button.



2-3. CAPSTAN MOTOR, REEL MOTOR



2-4. HEAD, PINCH ROLLER



SECTION 3 ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab:

record/playback/erase head	pinch roller
rubber belts	capstan
idle	
2. Demagnetize the record/playback head with a head demagnetizer. (Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	30 to 60g·cm (0.42 to 0.83oz·inch)
Forward back tension	CQ-102C	1 to 5g·cm (0.014 to 0.069 oz·inch)
Reverse	CQ-102RC	30 to 60g·cm (0.42 to 0.83 oz·inch)
Reverse back tension	CQ-102RC	1 to 5g·cm (0.014 to 0.069 oz·inch)
FF/REW	CQ-201B	65 to 90g·cm (0.903 to 1.24 oz·inch)

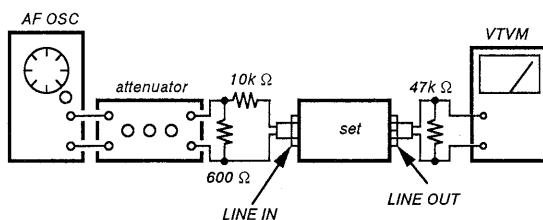
3-2. ELECTRICAL ADJUSTMENTS

PRECAUTION

1. The adjustment should be performed in the publication. (Be sure to make playback adjustment at first.)
2. The adjustments and measurement should be performed for both L-CH and R-CH.
 - Switch position

DOLBY NR switch	: OFF
DIR MODE switch	: \leftrightarrow
 - Standard record position : Deliver the standard input signal level to input jack and set the REC LEVEL control to obtain the standard output signal level as follows.

— Record Mode —



Standard Input Level

Input terminal	LINE IN
source impedance	10kΩ
input signal level	0.5V (-3.8dB)

Standard Output Level

Output terminal	LINE OUT
load impedance	47kΩ
output signal level	0.5V (-3.8dB)

Test Tape

Tape	Contents	Use
P-4-A100	10kHz, -10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

$$0dB=0.775V$$

Test Mode

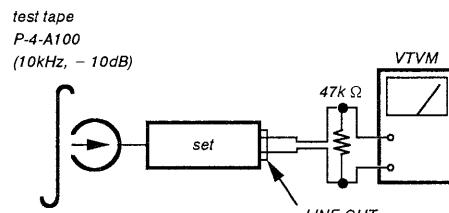
1. Insert a short-circuit plug into TP801 (2P) and turn ON the power switch. (Earth pin ④ of IC801 and turn ON the power switch.) At first, all the fluorescent tubes light up, then the system returns to normal display.
2. To release the test mode, remove the short plug and turn off the power switch.
3. Remove the short plug after completion of adjustment.

Record/Playback Head Azimuth Adjustment

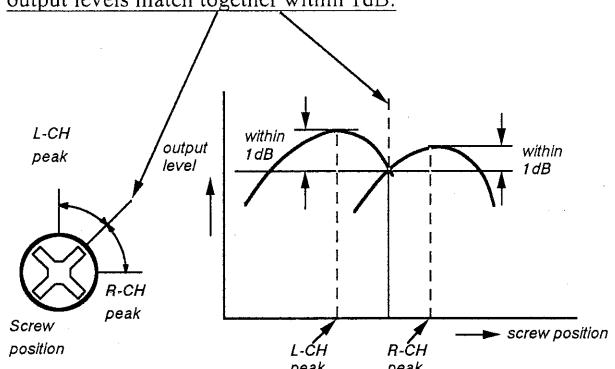
DECK-A **DECK-B**

Procedure :

1. Forward playback Mode

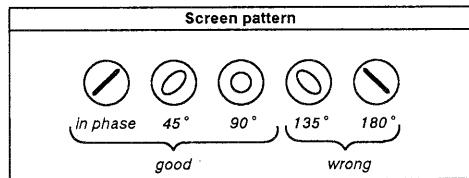
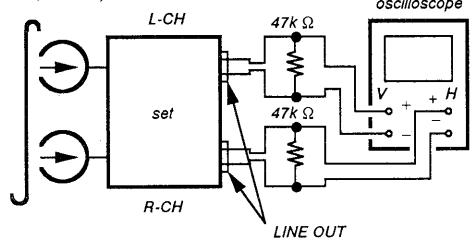


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



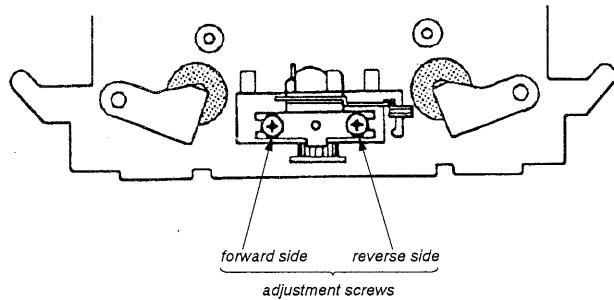
3. Playback Mode

test tape
P-4-A100
(10kHz, -10dB)



4. Change the reveres playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screws with suitable locking compound.

Adjustment Location : — record/playback head —

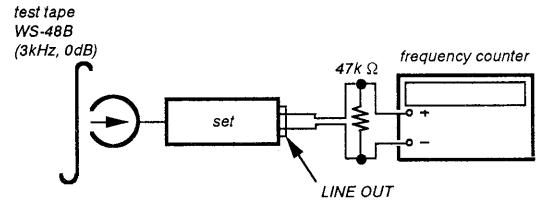


Tape Speed Adjustment

DECK-A **DECK-B**

Procedure :

- Forward Playback Mode —



(high speed adjustment)

1. Connect @4 pin of IC801 to ground.
2. Set to FWD playback mode.
3. Keep on pressing the HIGH SPEED DUBBING switch.
4. Adjust RV72 so that the frequency counter reading becomes $6,000 \pm 20\text{Hz}$.

(normal speed adjustment)

1. Set to FWD playback mode.
2. Adjust RV71 so that the frequency counter reeding becomes $3,000 \pm 10\text{Hz}$.

Frequency difference between the beginning and the end of the tape should be within 3%.

Frequency difference between the deck A and deck B the beginning of the tape should be within 1.5%.

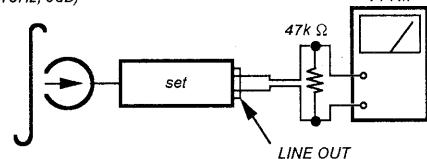
Adjustment Location : AUDIO board

DECK-A **DECK-B**

Procedure :

- Forward Playback Mode —

test tape
P-4-L300
(315Hz, 0dB)



Adjust RV11(L-CH) and RV21(R-CH) so the VTVM reading becomes the adjustment limits below.

Adjustment Value :

LINE OUT level : $-7.7 \pm 0.5\text{dB}$ (0.301 to 0.338V)

Level difference between channels : within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

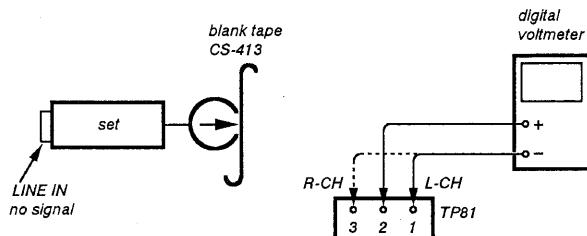
Adjustment Location : AUDIO board

Bias Consumption Current Adjustment [DECK-A] [DECK-B]

This adjustment should be performed when replacing the head assy or the bias oscillating transformer (T81, T91).

Procedure :

() : R-CH



1. Connect the digital voltmeter to test point TP81.
2. Set RV81 (RV91) to mechanical center.
3. Set to FWD record mode.
4. Adjust T81 (T91) so that the digital voltmeter reading becomes minimum.

Adjustment Value : Maximum 220mV

Adjustment Location : AUDIO board

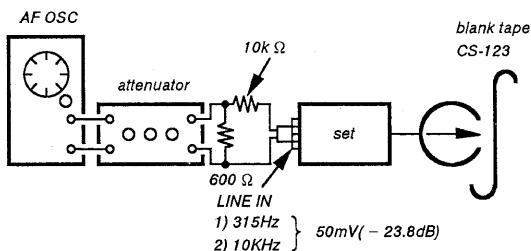
Record Bias Adjustment [DECK-A] [DECK-B]

Setting :

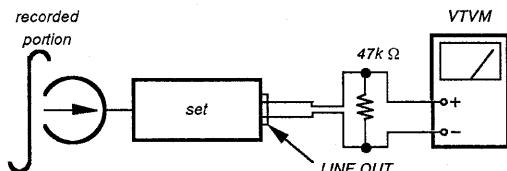
REC LEVEL control : standard record position (Refer to page 7.)

Procedure :

1. Record Mode



2. Playback Mode



Confirm that the 10kHz playback output is $0 \pm 0.5\text{dB}$ relative to the 315Hz output. If necessary, adjust RV81(L-CH), RV91(R-CH) and repeat the steps given above.

Adjustment Location : AUDIO board

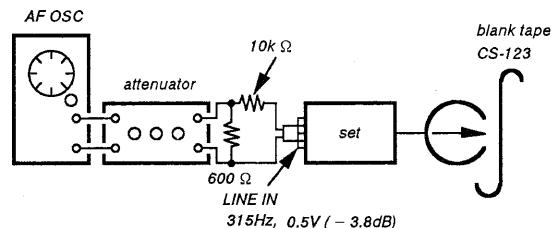
Record Level Adjustment [DECK-A] [DECK-B]

Setting :

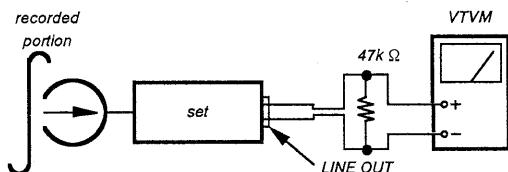
REC LEVEL control : standard record position (Refer to page 7.)

Procedure :

1. Record Mode



2. Playback Mode



Confirm playback the tape recorded become adjustment level as follows.

If necessary, adjust RV102(L-CH), RV202(R-CH) and repeat the steps 1 and 2.

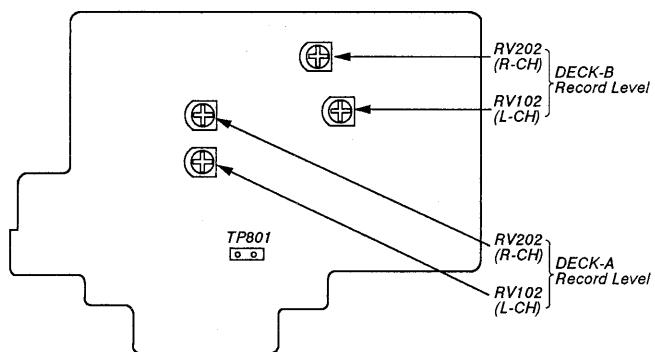
Adjustment Value :

LINE OUT level : $-3.8 \pm 0.5\text{dB}$ (0.47 to 0.53V)

Adjustment Location : MAIN board

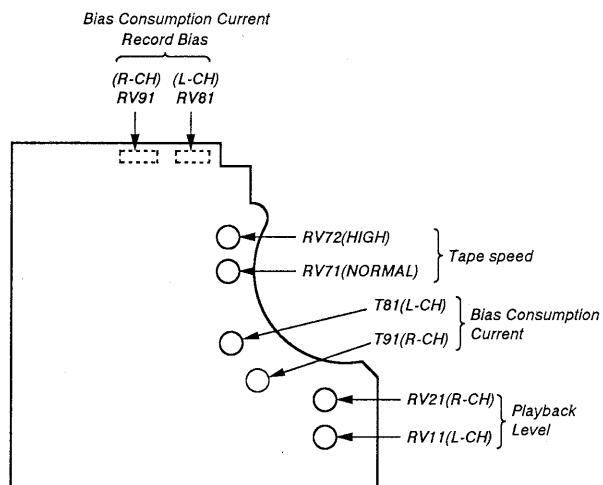
— Adjustment Parts Location Diagrams —

[MAIN BOARD]



DECK-A, DECK-B :

[AUDIO BOARD]



SECTION 4

EXPLANATION OF IC TERMINALS

IC801 CXP82220-016Q

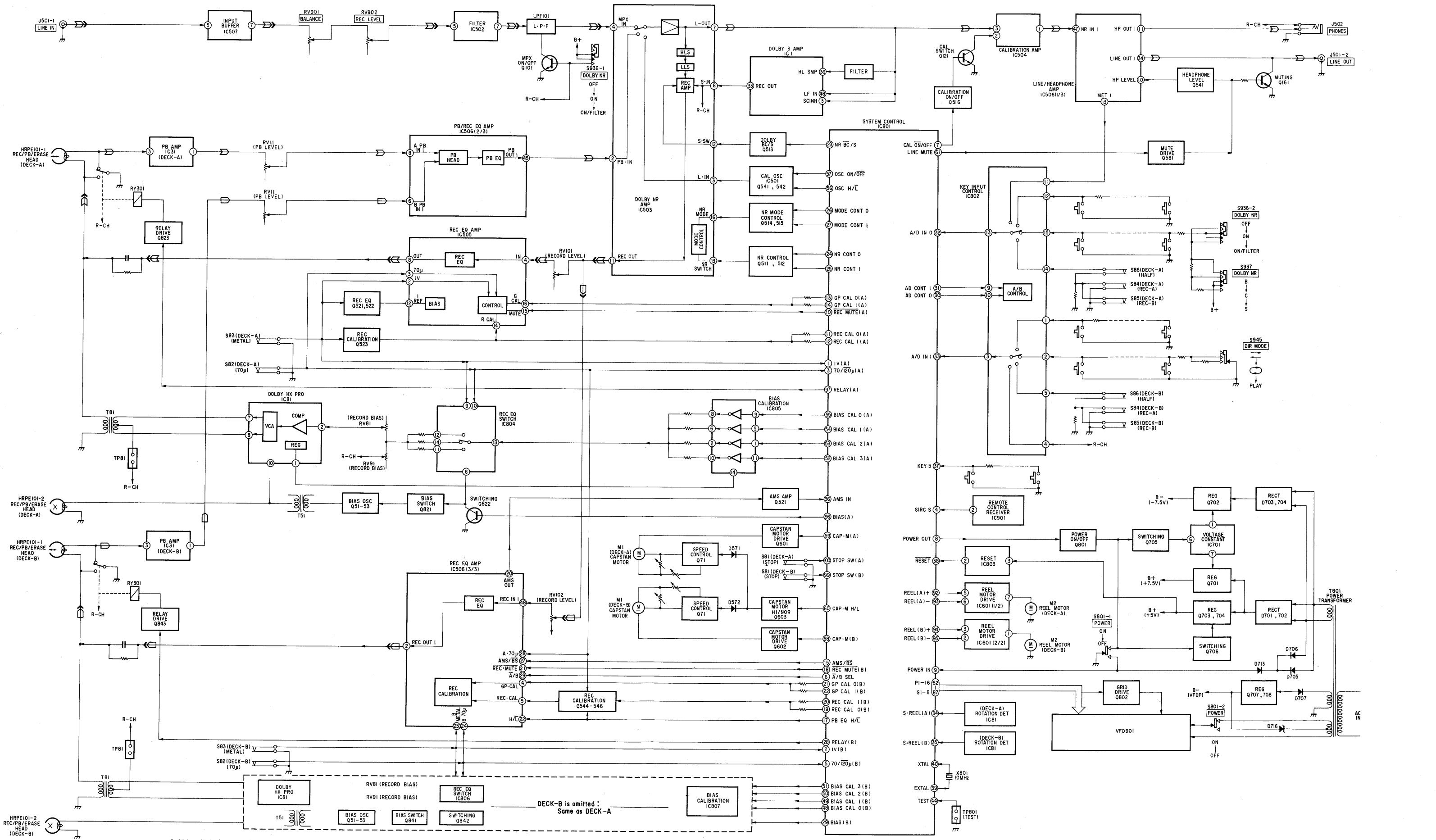
Pin No.	Pin name	I/O	Description
1	IV (A)	I	DECK-A METAL tape selector. (LEAF SW)
2	IV (B)	I	DECK-B METAL tape selector. (LEAF SW)
3	70/ <u>120</u> μ (A)	I	DECK-A 70/ <u>120</u> μ tape selector. (LEAF SW)
4	SIRCS	I	SIRCS signal in terminal.
5	70/ <u>120</u> μ (B)	I	DECK-B 70/ <u>120</u> μ tape selector. (LEAF SW)
6	A/B SEL	O	A/B selector. "L" : DECK-A, "H" : DECK-B
7	CAL <u>ON</u> /OFF	O	Calibration <u>ON</u> /OFF control. "L" : ON
8	POWER OUT	O	Power ON/OFF DET.
9	POWER IN	I	Power OFF DET. OFF : 0V
10	<u>REC MUTE</u> (A)	O	Recording mute ON/OFF control. "L" : ON
11	REC CAL0 (A)	O	Recording calibration. "H" : ON
12	REC CAL1 (A)	O	Recording calibration. "H" : ON
13	GP CAL0 (A)	O	GP calibration terminal.
14	GP CAL1 (A)	O	GP calibration terminal.
15	AMS/ <u>BS</u>	O	AMS/ <u>BS</u> selector. "L" : BS ON
16	DIR•SW(A)	I	Direction SW (A) input terminal.
17	PB EQ H/ <u>L</u>	O	Playback EQ H/ <u>L</u> selector.
18	<u>RE MUTE</u> (B)	O	Recording mute ON/OFF control. "L" : ON
19	REC CAL0 (B)	O	Recording calibration. "H" : ON
20	REC CAL1 (B)	O	Recording calibration. "H" : ON
21	GP CAL0 (B)	O	GP calibration terminal.
22	GP CAL1 (B)	O	GP calibration terminal.
23	NR <u>BC</u> /S	O	Dolby NR <u>BC</u> /S selector.
24	NR CONT0	O	Dolby NR control terminal.
25	NR CONT1	O	Dolby NR control terminal.
26	MODE CONT0	O	Mode control terminal.
27	MODE CONT1	O	Mode control terminal.
28	RELAY (B)	O	Recording/playback selector at DECK-B.
29	BIAS (B)	O	Bias ON/OFF at DECK-B.
30	AD CONT0	O	A/D control.
31	AD CONT1	O	A/D control.
32	A/D IN0	I	A/D input terminal.
33	A/D IN1	I	A/D input terminal.
34	S•REEL (A)	I	S-side reel rotation detection at DECK-A.
35	S•REEL (B)	I	S-side reel rotation detection at DECK-B.
36	AMS IN	I	AMS signal input terminal.
37	KEY 5	I	Key 5 input.
38	<u>RESET</u>	I	Reset terminal.
39	EXTAL	O	System clock output terminal. (10MHz)
40	XTAL	I	System clock input terminal. (10MHz)

Pin No.	Pin name	I/O	Description
41	Vss	I	Power supply (GND)
42	TX	I	Connected to GND.
43	TEX	I	Connected to GND.
44	TEST	I	Test mode terminal. "L" : Test mode
45	NC	-	Connected to GND.
46	AVREF	-	AVREF terminal connected to +5V.
47	AVss	-	GND.
48	BIAS CAL0 (B)	O	EQ Bias calibration terminal. (DECK-B)
49	BIAS CAL1 (B)	O	EQ Bias calibration terminal. (DECK-B)
50	BIAS CAL2 (B)	O	EQ Bias calibration terminal. (DECK-B)
51	BIAS CAL3 (B)	O	EQ Bias calibration terminal. (DECK-B)
52	BIAS CAL0 (A)	O	EQ Bias calibration terminal. (DECK-A)
53	BIAS CAL1 (A)	O	EQ Bias calibration terminal. (DECK-A)
54	BIAS CAL2 (A)	O	EQ Bias calibration terminal. (DECK-A)
55	BIAS CAL3 (A)	O	EQ Bias calibration terminal. (DECK-A)
56	OSC H/L	O	OSC H/L control.
57	OSC ON/OFF	O	OSC ON/OFF control.
58	CAP・M (B)	O	Capstan motor at DECK-B.
59	CAP・M (A)	O	Capstan motor at DECK-A.
60	CAP・M H/L	O	Capstan motor speed selector.
61	LINE MUTE	O	Line mute control.
62	P16	O	VFD Segment drive.
63	P15	O	VFD Segment drive.
64	P14	O	VFD Segment drive.
65	P13	O	VFD Segment drive.
66	P12	O	VFD Segment drive.
67	P11	O	VFD Segment drive.
68	P10	O	VFD Segment drive.
69	P9	O	VFD Segment drive.
70	P8	O	VFD Segment drive.
71	P7	O	VFD Segment drive.
72	P6	O	VFD Segment drive.
73	P5	O	VFD Segment drive.
74	P4	O	VFD Segment drive.
75	P3	O	VFD Segment drive.
76	P2	O	VFD Segment drive.
77	P1	O	VFD Segment drive.
78	G1	O	VFD Grid drive.
79	G2	O	VFD Grid drive.
80	G3	O	VFD Grid drive.

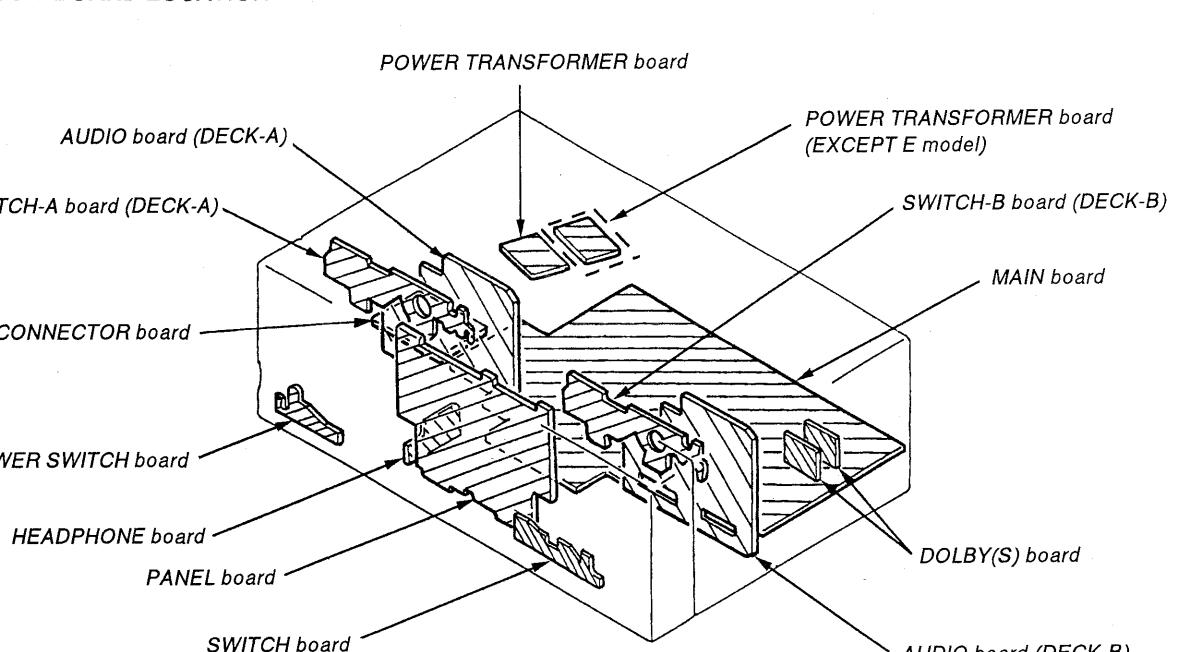
Pin No.	Pin name	I/O	Description
81	G4	O	VFD Grid drive.
82	G5	O	VFD Grid drive.
83	G6	O	VFD Grid drive.
84	G7	O	VFD Grid drive.
85	G8	O	VFD Grid drive.
86	G6, G7	O	VFD Grid drive.
87	G7, G8	O	VFD Grid drive.
88	VFDP	-	VFD Power.
89	VDD	-	Power supply (+5V)
90	NC	-	Connected to +5V
91	Vss	-	Power supply (GND)
92	REEL (A) +	O	Reel motor (+) output at DECK-A.
93	REEL (A) -	O	Reel motor (-) output at DECK-A.
94	REEL (B) +	O	Reel motor (+) output at DECK-B.
95	REEL (B) -	O	Reel motor (-) output at DECK-B.
96	BIAS (A)	O	Bias ON/OFF at DECK-A.
97	RELAY (A)	O	Recording/playback selector at DECK-A.
98	DIR•SW (B)	I	Direction SW(B) input terminal.
99	STOP SW(B)	I	Mechanism stop switch input for DECK-B.
100	STOP SW(A)	I	Mechanism stop switch input for DECK-A.

SECTION 5 DIAGRAMS

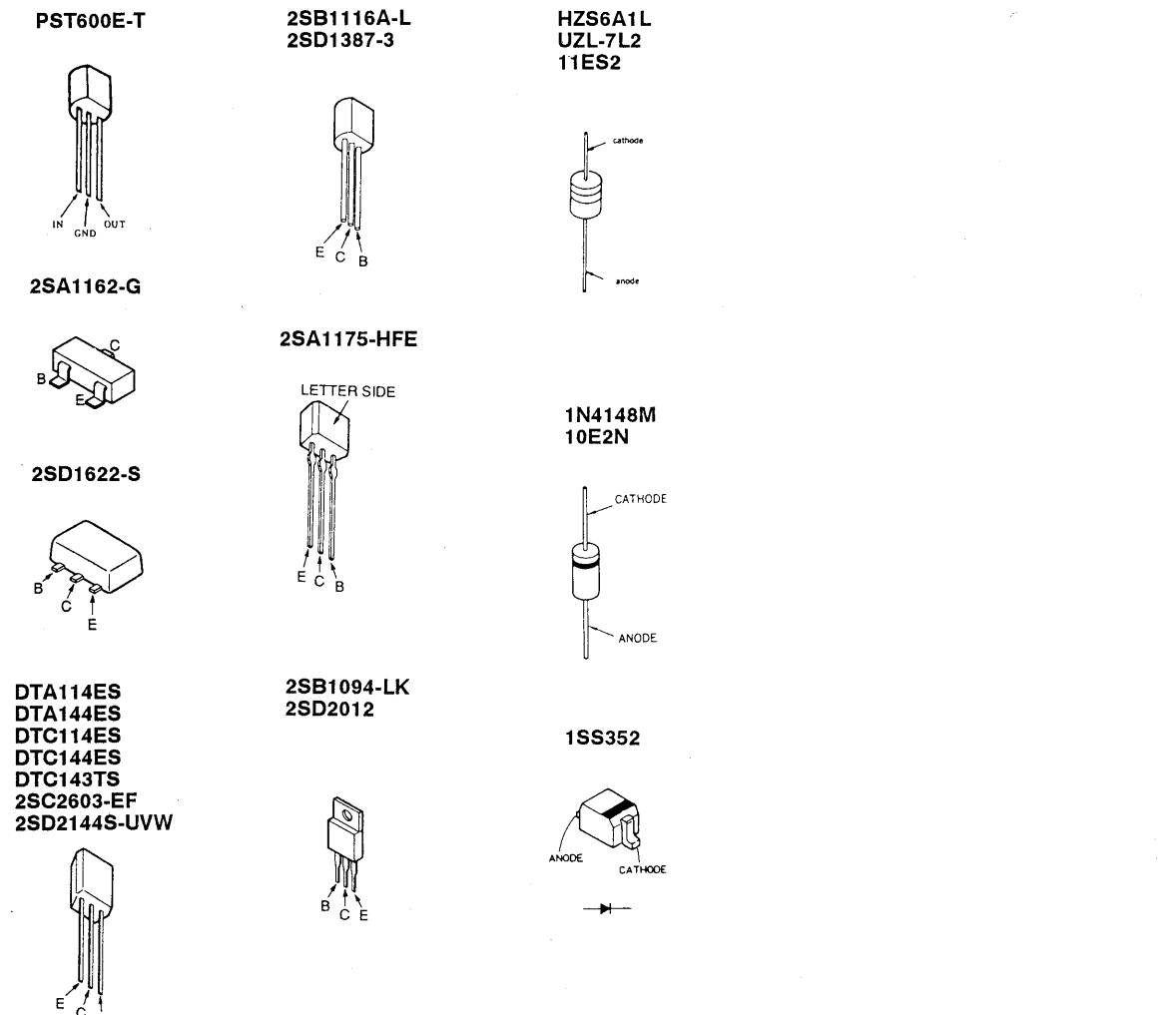
5-1. BLOCK DIAGRAM



5-2. CIRCUIT BOARD LOCATION



● SEMICONDUCTOR LEAD LAYOUTS



• SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
D151	G - 19	Q101	E - 16
D251	H - 18	Q121	D - 18
D501	B - 14	Q161	B - 18
D502	B - 14	Q201	C - 16
D511	C - 14	Q221	C - 17
D512	D - 14	Q261	B - 19
D513	C - 14	Q501	B - 14
D514	D - 14	Q502	B - 14
D541	F - 18	Q511	E - 13
D571	H - 24	Q512	E - 13
D572	H - 14	Q513	E - 13
D701	B - 23	Q514	D - 13
D702	B - 23	Q515	E - 13
D703	C - 23	Q516	E - 17
D704	C - 23	Q521	F - 24
D705	B - 24	Q522	E - 23
D706	B - 24	Q523	F - 21
D707	D - 23	Q541	F - 17
D708	B - 20	Q542	F - 17
D709	B - 21	Q544	F - 18
D710	B - 21	Q545	F - 18
D711	C - 22	Q546	F - 17
D712	B - 23	Q561	B - 19
D713	B - 24	Q601	I - 24
D714	D - 23	Q602	I - 23
D715	D - 22	Q603	I - 23
D716	D - 23	Q701	A - 22
D801	I - 21	Q702	C - 21
D802	I - 21	Q703	A - 23
D803	I - 21	Q704	B - 23
D804	I - 21	Q705	B - 22
IC501	B - 13	Q706	B - 23
IC502	B - 17	Q707	D - 22
IC503	D - 15	Q708	D - 23
IC504	D - 17	Q801	F - 23
IC505	E - 22	Q802	J - 21
IC506	D - 19	Q821	G - 25
IC507	B - 16	Q822	G - 26
IC901	H - 23	Q823	F - 25
IC701	B - 22	Q841	G - 15
IC601	H - 20	Q842	G - 15
IC802	G - 18	Q843	G - 15
IC803	G - 19		
IC804	G - 25		
IC805	G - 24		
IC806	G - 15		
IC807	H - 16		
IC901	J - 28		

(DECK-A)

(DECK-B)

Ref. No.	Location	Ref. No.	Location
D31	C - 3	D31	I - 3
IC31	D - 3	IC31	I - 3
IC81	B - 4	IC81	H - 4
(AUDIO)	C - 11	(AUDIO)	I - 11
(SW-A)		(SW-B)	
Q51	B - 3	Q51	H - 3
Q52	B - 3	Q52	H - 3
Q53	B - 3	Q53	H - 3
Q71	C - 5	Q71	I - 5

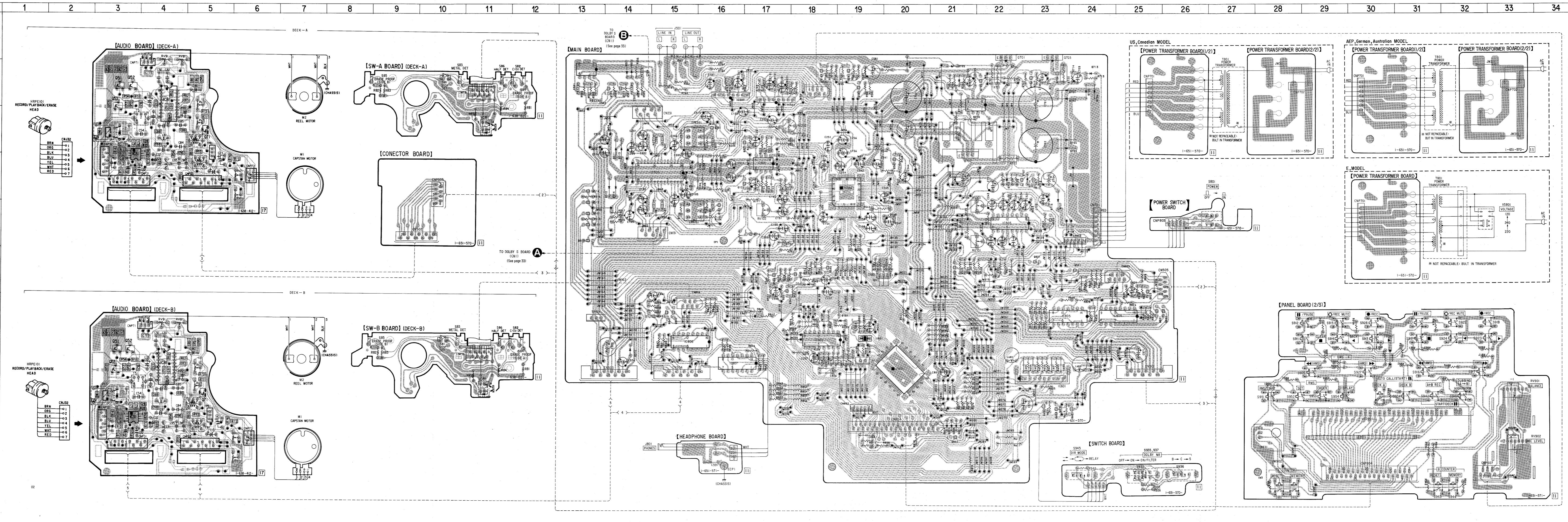
Note:

- ○ : parts extracted from the component side.
- □ : parts mounted on the conductor side.
- ● : Through hole.
- ◻ : Pattern on the side which is seen.
- ◻◻ : Pattern of the rear side.

• G : German

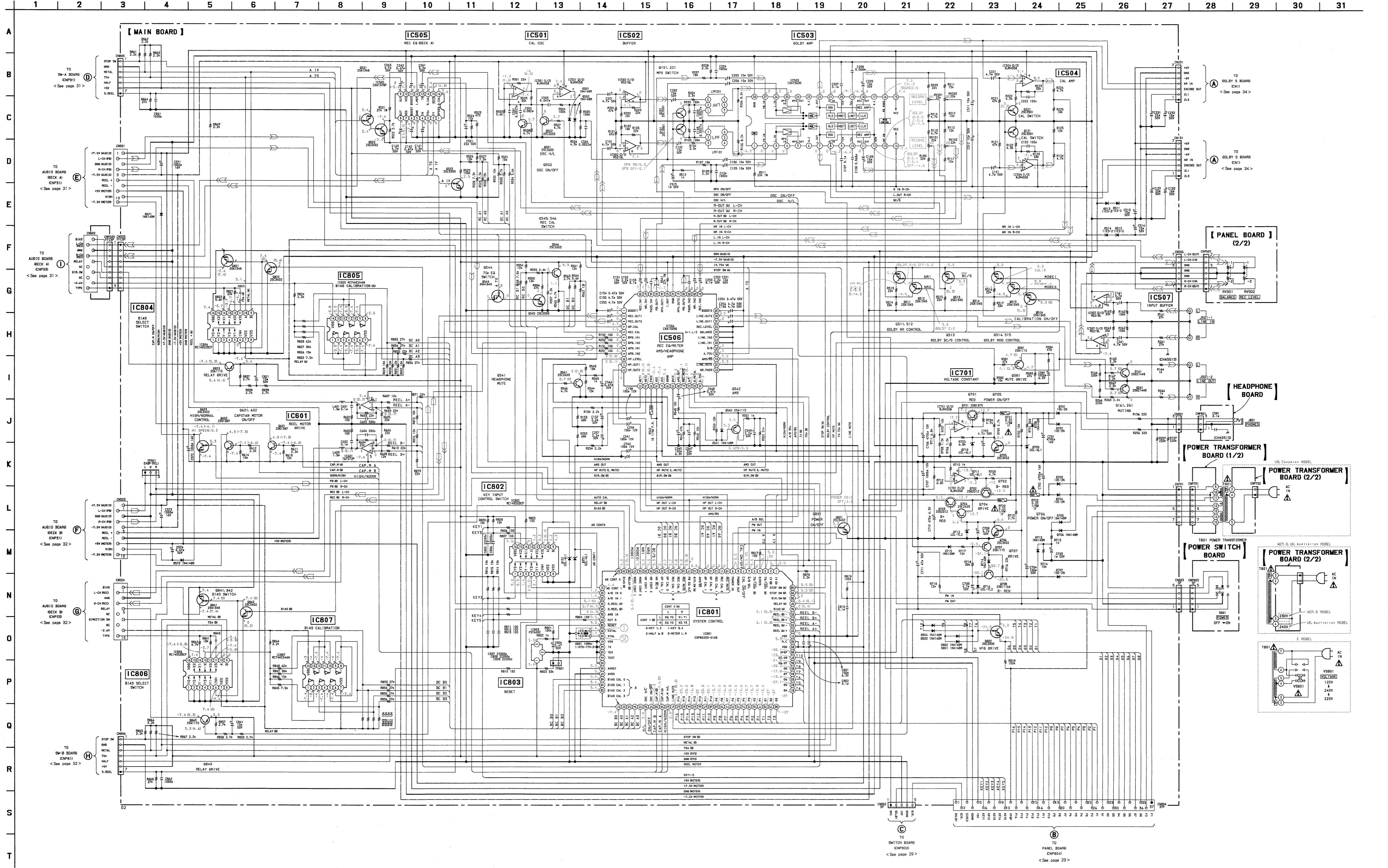
AUS : Australian

5-3. PRINTED WIRING BOARDS (MAIN SECTION) • Refer to page 16 for Semiconductor Lead Layouts.

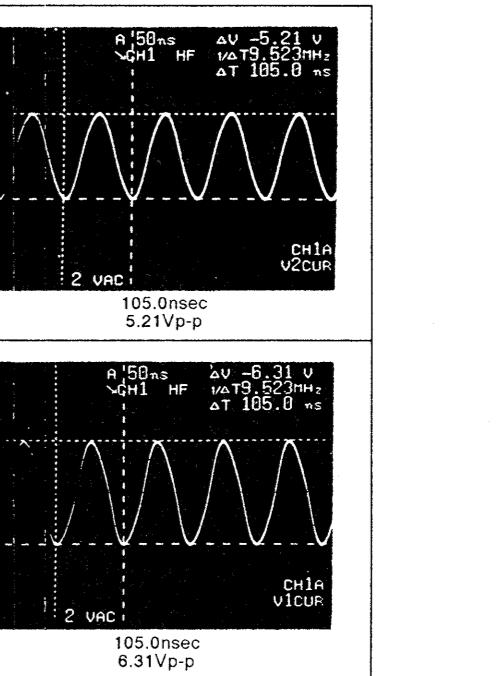


5-4. SCHEMATIC DIAGRAM (MAIN SECTION)

• Refer to page 35 for IC Block Diagrams.



• WAVEFORMS



Note :

- All capacitors are in μF unless otherwise noted, pF: μF 50V or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- % : indicates tolerance.
- \triangle : internal component.
- \square : fusible resistor.

Note :

- The components identified by the mark \triangle are critical for safety. Replace only with part number specified.
- \square : $B+$ Line
 - \square : $B-$ Line
 - \square : adjustment for repair.

Voltage and waveforms are dc with respect to ground under no-signal conditions.

mark : STOP

() : REC

Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.

Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.

Circled numbers refer to waveforms.

Signal path:

\Rightarrow : FM \square : PB (DECK A)

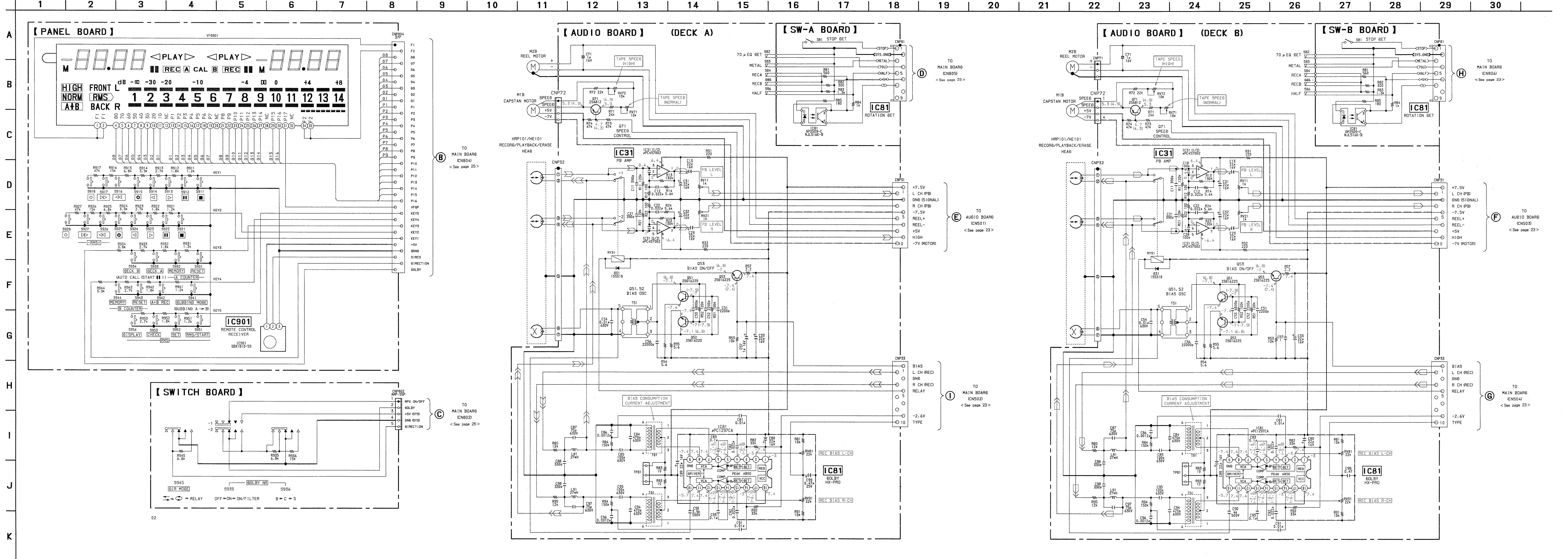
\square : REC (DECK A)

\square : PB (DECK B)

\square : REC (DECK B)

G : German
AUS : Australian

5-5. SCHEMATIC DIAGRAM (AUDIO SECTION)



Note :

- All capacitors are in μ F unless otherwise noted. pF: $\mu\mu$ F 50W or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- % : indicates tolerance.
- Δ : internal component.
- --- : fusible resistor.
- Circled numbers refer to waveforms.
- Signal path:

 - \Rightarrow : FM \Rightarrow PB (DECK A)
 - \Rightarrow : REC (DECK A)
 - \square : PB (DECK B)
 - \square : REC (DECK B)

G: German
AUS: Australian

Voltages are taken with a VOM (Input impedance 10M Ω).
Voltage variations may be noted due to normal production tolerances.
Waveforms are taken with an oscilloscope.
Voltage variations may be noted due to normal production tolerances.
Signal path:

\Rightarrow : FM \Rightarrow PB (DECK A)

\Rightarrow : REC (DECK A)

\square : PB (DECK B)

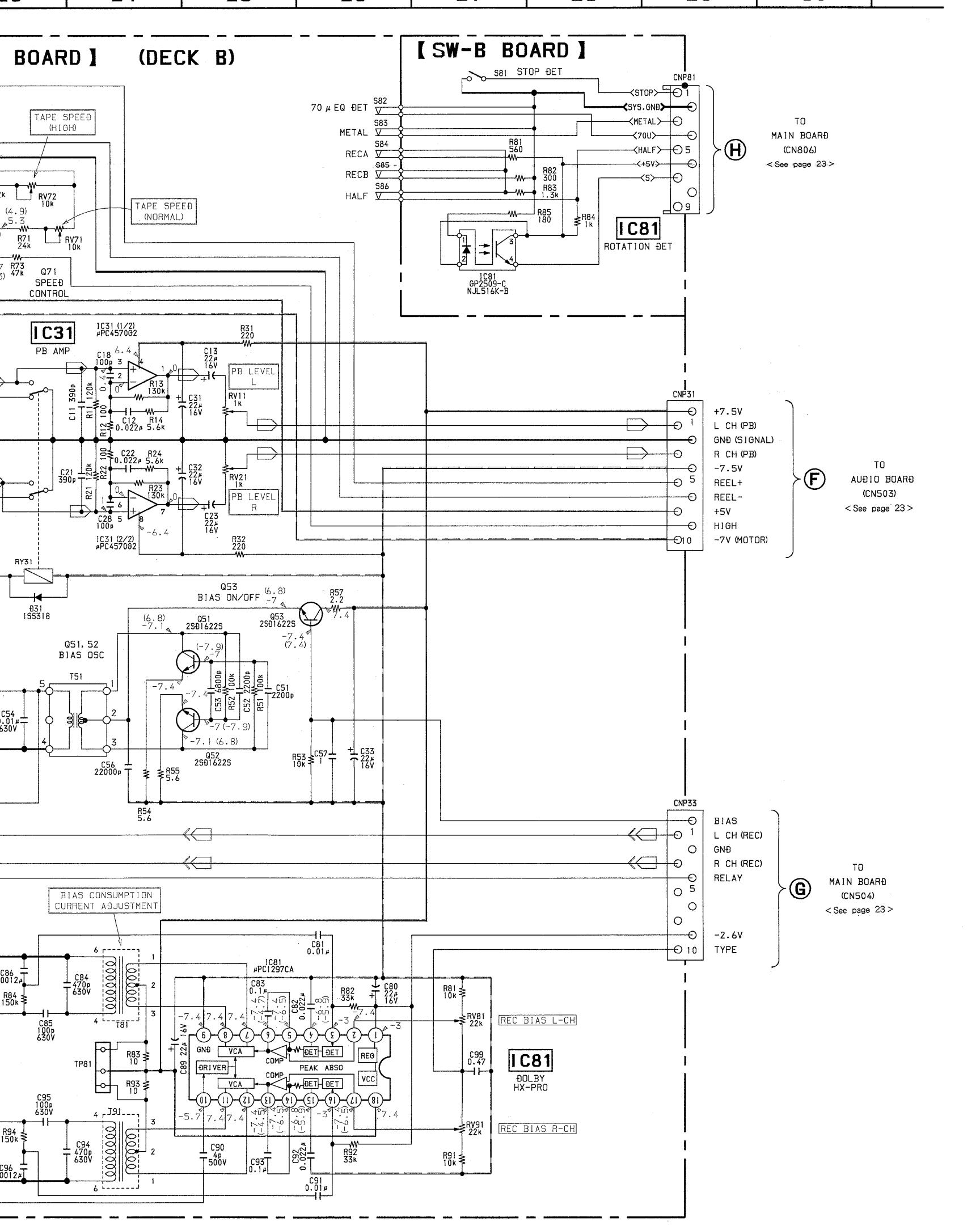
\square : REC (DECK B)

Note :

- The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.
- Note : Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

: B+ Line
: B- Line
: adjustment for repair.
Voltage and waveforms are dc with respect to ground under no-signal conditions.
no mark : STOP
() : REC

5-6. SCHEMATIC DIAGRAM (AUDIO SECTION)



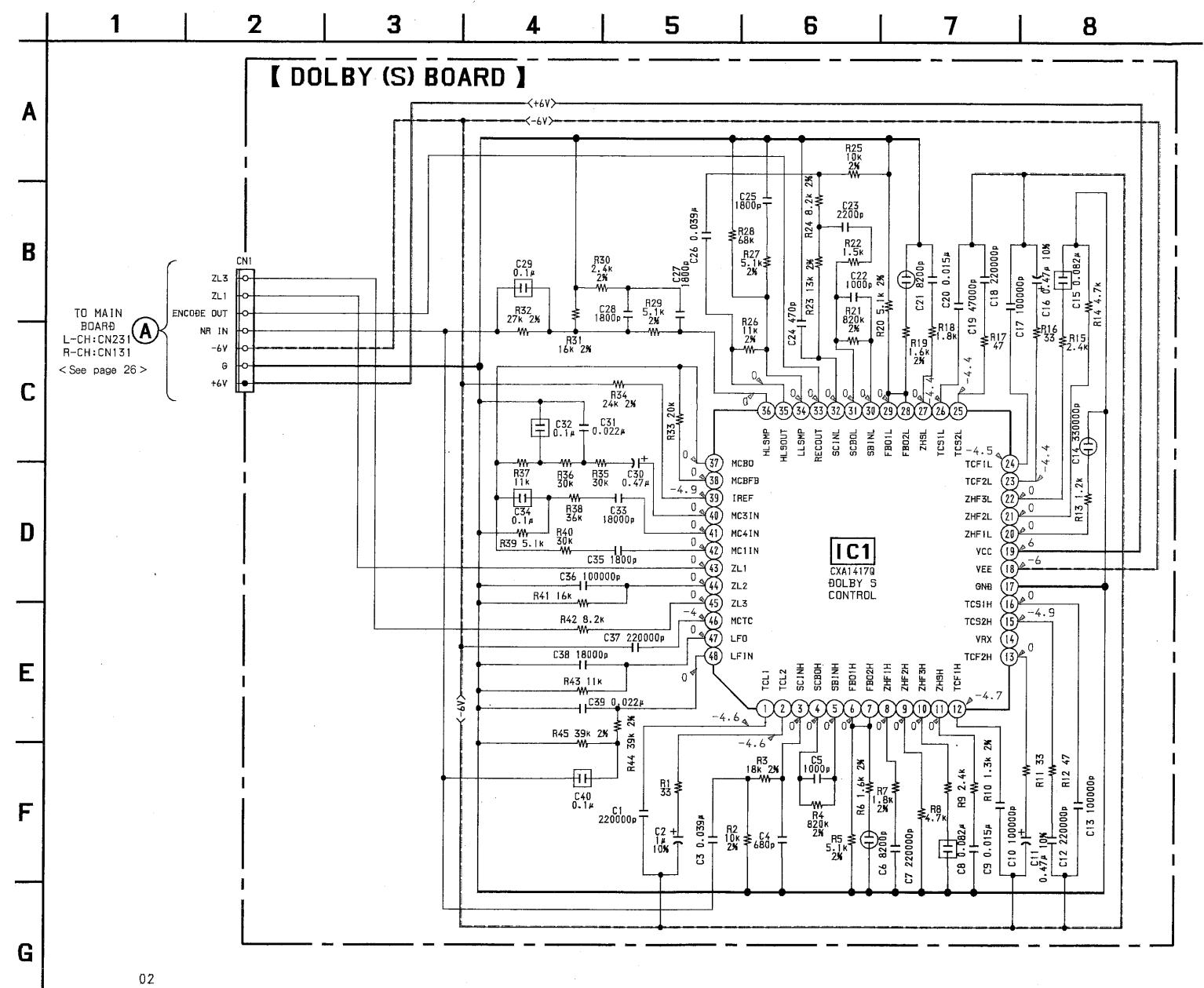
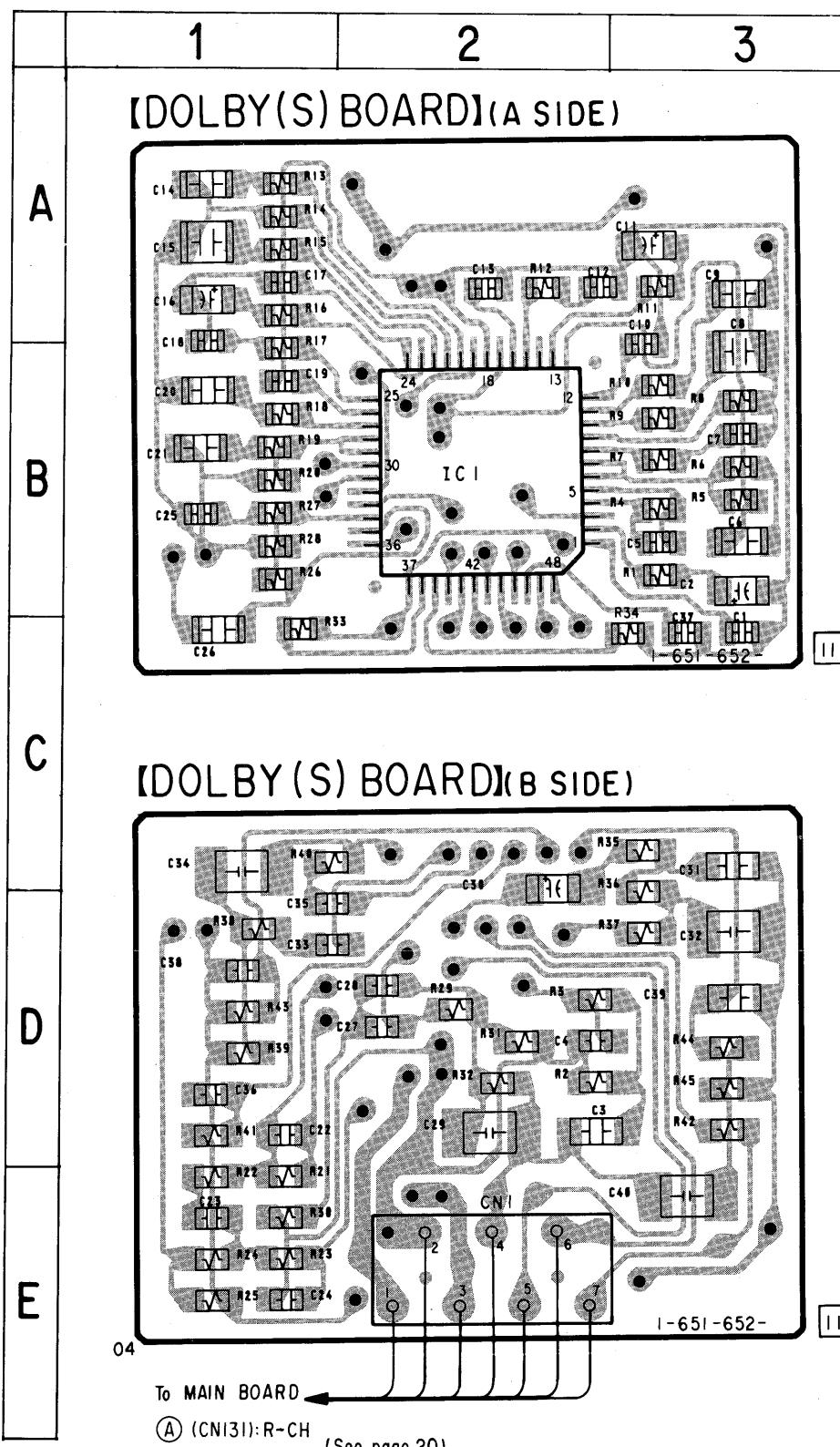
5-7. SCHEMATIC DIAGRAM (DOLBY (S) SECTION)

• Refer to page 27 for Note.

5-6. PRINTED WIRING BOARDS (DOLBY (S) SECTION)

• Refer to page 18 for Note.

• Refer to page 16 for Semiconductor Lead Layouts.



SECTION 6 EXPLODED VIEWS

NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts Example : KNOB, BALANCE (WHITE)....(RED)

↑
Parts color Cabinet's color

- Items marked “ * ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

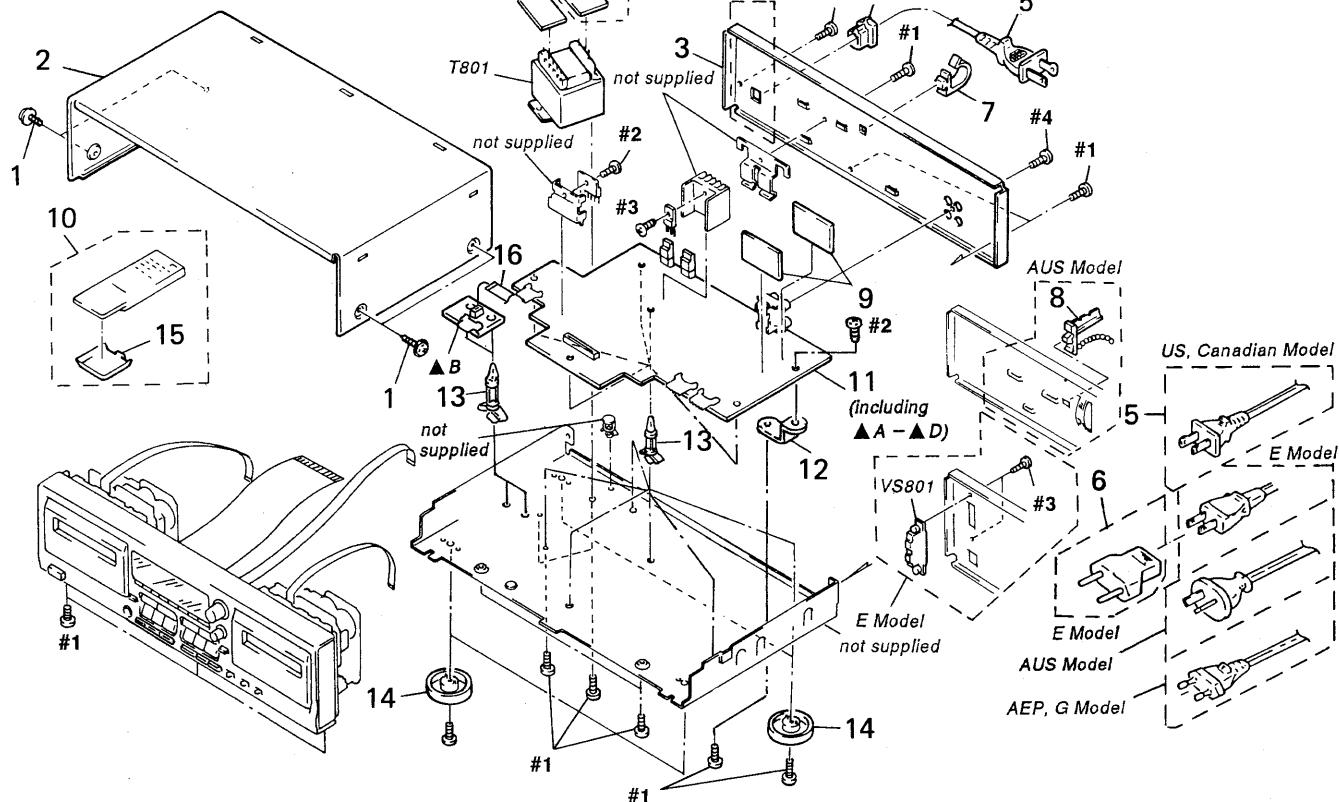
The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- Abbreviations
G : German
AUS : Australian

6-1. CHASSIS SECTION

- $\blacktriangle A$: POWER TRANSFORMER BOARD
 $\blacktriangle B$: CONNECTOR BOARD

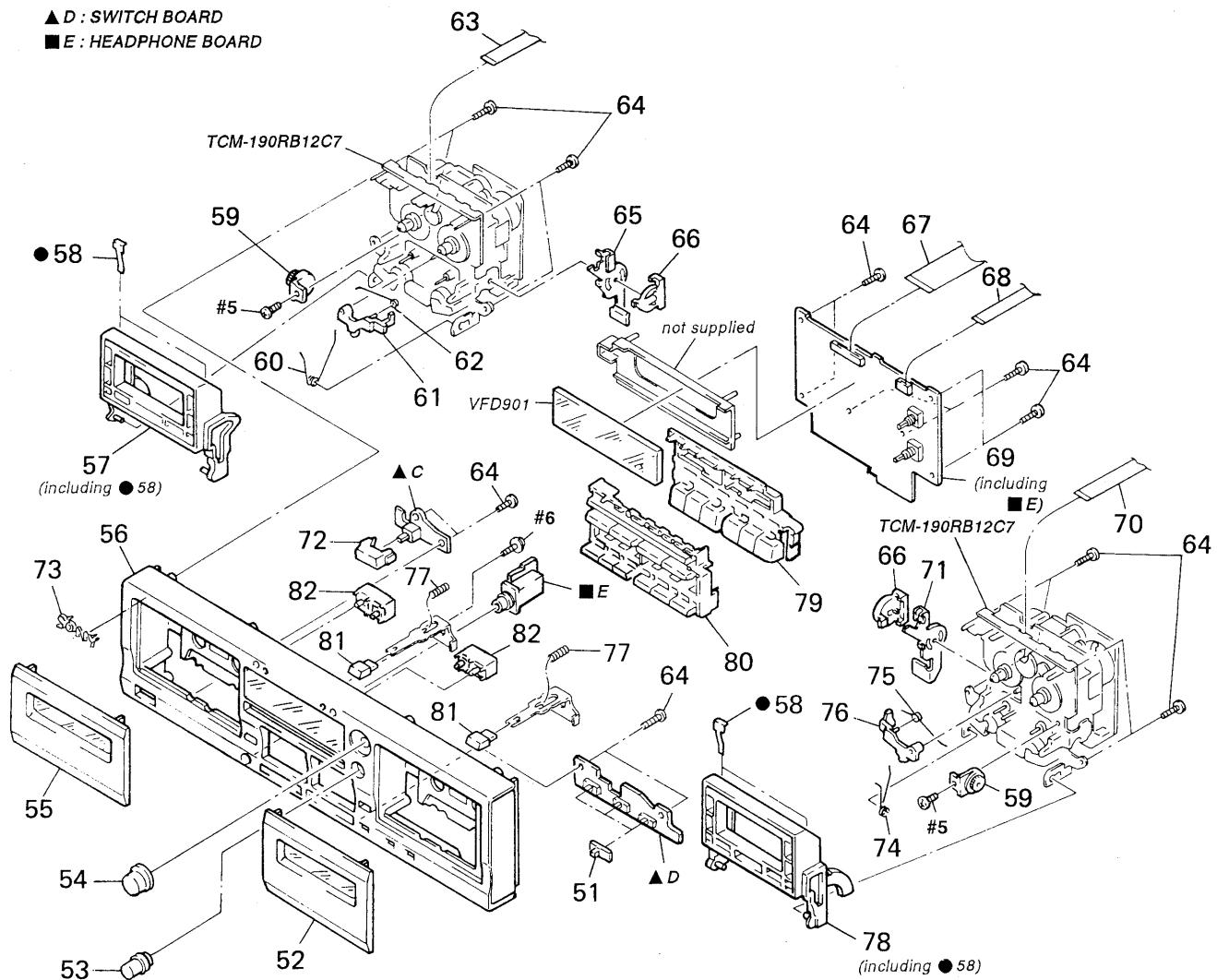


Ref. No.	Part No.	Description	Remark
1	3-704-366-01	SCREW (CASE) (M3X8)	
2	3-332-578-61	CASE	
* 3	3-910-808-42	PANEL, BACK(WR801ES)	
* 3	3-910-808-52	PANEL, BACK(AEP, German)	
* 3	3-910-808-61	PANEL, BACK(AUS)	
* 3	3-910-808-71	PANEL, BACK(E)	
* 4	3-703-244-00	BUSHING (2104), CORD(AEP, German. AUS)	
* 4	3-703-571-11	BUSHING (S) (4516), CORD (WR745S:E, WR801ES)	
\triangle 5	1-551-188-XX	CORD, POWER(E)	
\triangle 5	1-558-945-21	CORD, POWER (POLAR. SPT-1) (WR801ES)	
\triangle 5	1-575-651-21	CORD, POWER(AEP, German)	
\triangle 5	1-696-845-11	CORD, POWER(AUS)	
\triangle 6	1-569-007-11	ADAPTER, CONVERSION 2P(E3)	
* 7	4-949-235-01	HOOK (WR745S:AEP, E, German/WR801ES)	
8	4-956-370-02	BAND, PLUG FIXED(AUS)	

Ref. No.	Part No.	Description	Remark
* 9	A-2007-173-A	DOLBY (S) BOARD COMPLETE	
10	1-465-738-11	REMOTE COMMANDER(RM-J903) (Canadian)	
* 11	A-2007-194-A	MAIN BOARD, COMPLETE (WR745S:AEP, German/WR801ES)	
* 11	A-2007-196-A	MAIN BOARD, COMPLETE(AUS)	
* 11	A-2007-197-A	MAIN BOARD, COMPLETE(E)	
* 12	3-332-563-01	BRACKET (P)	
* 13	3-346-265-11	HOLDER, PC BOARD	
14	4-956-885-11	FOOT (F58175S2W)	
15	2-181-754-21	COVER, BATTERY(Canadian)	
16	1-575-849-11	WIRE, FLAT TYPE (9 CORE)	
\triangle T801	1-426-784-11	TRANSFORMER, POWER(WR801ES)	
\triangle T801	1-426-785-11	TRANSFORMER, POWER(AEP, German, AUS)	
\triangle T801	1-426-910-11	TRANSFORMER, POWER(E)	
\triangle VS801	1-692-155-11	SELECTOR, POWER VOLTAGE (VOLTAGE SELECTOR) (E)	

6-2. FRONT PANEL SECTION

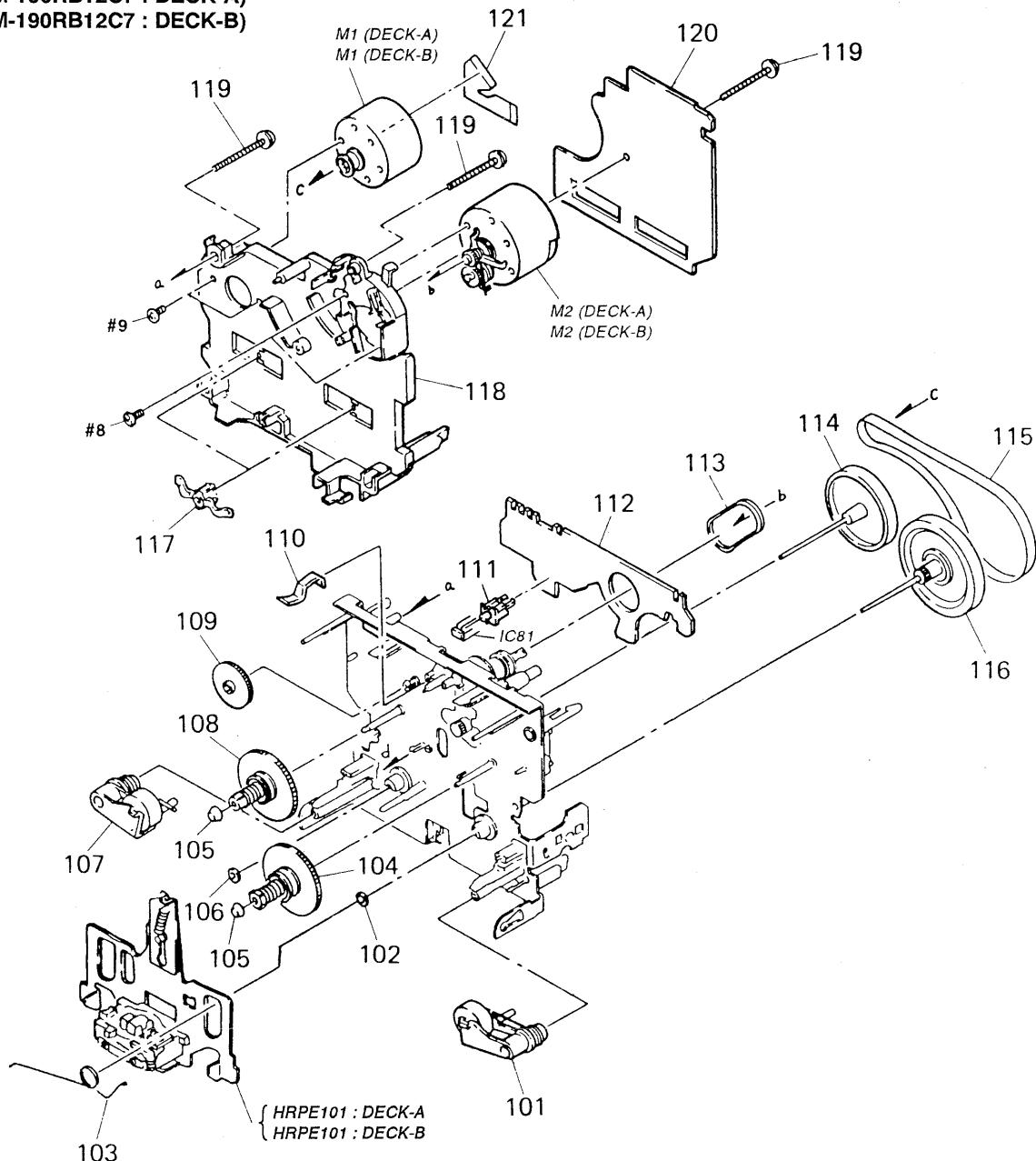
▲ C : POWER SWITCH BOARD
 ▲ D : SWITCH BOARD
 ■ E : HEADPHONE BOARD



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-350-138-11	KNOB (SLIDE)		66	3-354-957-01	JOINT (LOCK LEVER)	
52	X-3367-922-1	LID (B) ASSY, CASSETTE(WR745S)		67	1-765-406-11	WIRE (FLAT TYPE) (37 CORE)	
52	X-3367-991-1	LID (B) ASSY, CASSETTE(WR801ES)		68	1-590-963-11	WIRE (FLAT TYPE) (7 CORE)	
53	3-367-431-01	KNOB (BAL)		* 69	A-2007-195-A	PANEL BOARD, COMPLETE	
54	3-909-661-11	KNOB (RBC)		70	1-690-420-11	WIRE, FLAT TYPE (7 CORE)	
55	X-3367-921-1	LID (A) ASSY, CASSETTE(WR745S)		* 71	3-354-953-01	LEVER (LOCK LEVER L)	
55	X-3367-990-1	LID (A) ASSY, CASSETTE(WR801ES)		72	3-354-932-01	BUTTON (POWER)	
56	X-3367-919-1	PANEL ASSY, FRONT(US)		73	4-925-334-11	EMBLEM (5-A), SONY	
56	X-3367-920-1	PANEL ASSY, FRONT(WR745S)		74	3-354-959-01	SPRING (LOADING L), TORSION	
56	X-3368-337-1	PANEL ASSY, FRONT(Canadian)		75	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
57	A-4325-164-A	HOLDER (R) ASSY, CASSETTE		76	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
58	3-308-823-11	DETENT, CASSETTE		77	3-382-382-01	SPRING, COMPRESSION	
59	3-354-963-01	DAMPER		78	A-4325-163-A	HOLDER (L) ASSY, CASSETTE	
60	3-354-960-01	SPRING (LOADING R), TORSION		79	3-910-810-01	BUTTON (FR-J)	
61	3-354-956-01	LEVER (EJ SAFTY LEVER R)		80	3-910-812-01	BUTTON (WR)	
62	3-354-962-01	SPRING (EJ SAFTY SPRING R)		81	3-377-328-01	BUTTON (EJECT)	
63	1-590-209-21	WIRE (FLAT TYPE) (7 CORE)		82	3-377-329-11	BUTTON (COUNTER)	
64	4-951-620-01	SCREW (2.6X8, +BVTP)		VFD901	1-517-263-11	INDICATOR TUBE, FLUORESCENT	
* 65	3-354-954-01	LEVER (LOCK LEVER R)					

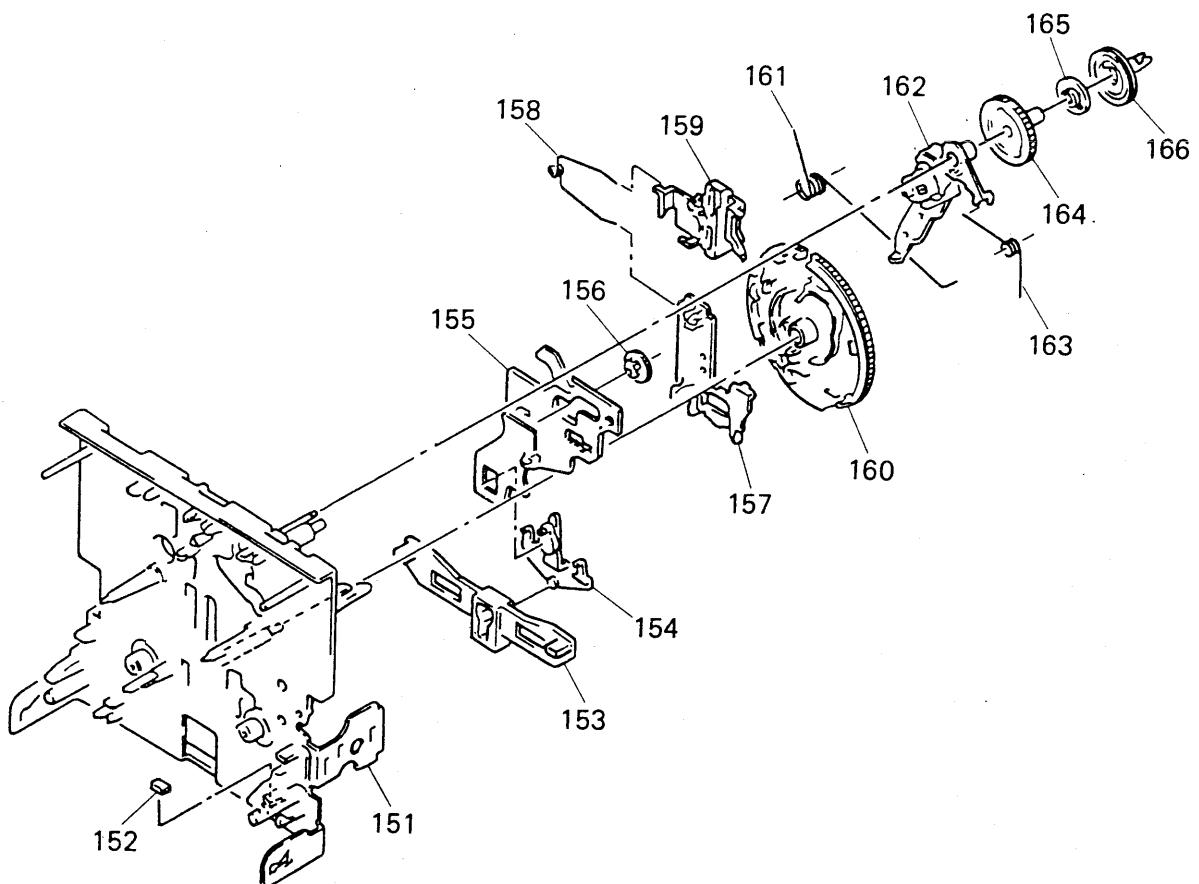
6-3. MECHANISM SECTION 1

(TCM-190RB12C7 : DECK-A)
(TCM-190RB12C7 : DECK-B)



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
101	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY		116	X-3359-406-1	FLYWHEEL (FWD) ASSY	
102	3-356-713-01	WASHER		117	3-575-321-00	RETAINER, THRUST, CAPSTAN	
103	3-359-455-01	SPRING, TORSION		* 118	3-359-436-01	BASE (THRUST RETAINER), FITTING	
104	X-3359-404-1	TABLE (A) ASSY, REEL		119	3-359-414-01	SCREW (+PTPWH 2X23)	
105	3-362-308-01	CAP (REEL)		* 120	A-2006-828-A	AUDIO BOARD, COMPLETE(DECK-A)	
106	3-356-714-01	WASHER		* 120	A-2006-828-A	AUDIO BOARD, COMPLETE(DECK-B)	
107	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY		121	1-638-983-11	MOTOR FLEXIBLE BOARD	
108	X-3362-078-1	TABLE ASSY, REEL		HRPE101A-2003-838-F	DECK ASSY, HEAD (RECORD/PLAYBACK/ERASE) (DECK-A)		
109	3-359-424-01	GEAR (REV GEAR)		HRPE101A-2003-838-F	DECK ASSY, HEAD (RECORD/PLAYBACK/ERASE) (DECK-B)		
110	3-359-430-01	SPRING(CASSETTE RETAINER), LEAF		IC81	8-749-924-10	IC PHONT REFLECTOR NJL5165K-B(H1)	
111	3-343-419-01	HOLDER (S SENSER A)		M1	X-3365-377-1	MOTOR ASSY, CAPSTAN (DECK-A)	
* 112	1-634-841-14	SW-A BOARD(DECK-A)		M1	X-3365-377-1	MOTOR ASSY, CAPSTAN (DECK-B)	
* 112	1-634-841-14	SW-B BOARD(DECK-B)		M2	X-3363-501-2	MOTOR ASSY, REEL (DECK-A)	
113	3-359-466-01	BELT (FR), SQUARE		M2	X-3363-501-2	MOTOR ASSY, REEL (DECK-B)	
114	X-3359-410-1	FLYWHEEL (REV) ASSY					
115	3-359-417-01	BELT (FLAT), CAPSTAN					

6-4. MECHANISM SECTION 2
(TCM-190RB12C7 : DECK-A)
(TCM-190RB12C7 : DECK-B)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	X-3359-415-1	CHASIS, MECHANICAL		159	3-359-429-01	SLIDER (BRAKE PLATE)	
152	3-359-469-01	SPACER		160	3-359-420-01	GEAR (CAM GEAR)	
* 153	3-359-425-01	SLIDER (REVERSE SLIDER)		161	3-359-456-01	SPRING (TRIGGER SPRING), TORSION	
154	3-359-426-01	LEVER (REVERSE LEVER)		162	X-3359-405-1	LEVER (FR ARM) ASSY	
* 155	3-359-415-01	SLIDER (TRIGGER SLIDER)		163	3-359-453-01	SPRING (FR ARM), TORSION	
156	3-359-448-01	GEAR (TRIGGER)		164	3-359-419-01	GEAR (FR GEAR)	
* 157	3-359-427-01	SLIDER (LEVERSE SLIDER)		165	3-359-421-01	CLUTCH (REEL DISK)	
158	3-359-454-01	SPRING, TORSION		166	3-359-418-01	PULLEY (FR PULLEY)	

AUDIO

SECTION 7 ELECTRICAL PARTS LIST

NOTE :

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS

All resistors are in ohms

METAL : Metal-film resistor

METAL OXIDE : Metal oxide-film resistor

F : nonflammable

- Items marked “ * ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- SEMICONDUCTORS

In each case, u : μ , for example:
 uA... : μ A..., uPA... : μ PA...
 uPB... : μ PB..., uPC... : μ PC...
 uPD... : μ PD...

- CAPACITORS

uF : μ F

- COILS

uH : μ H

The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
 Replace only with part number specified.

Les composants identifiés par une marque \triangle sont critiques pour la sécurité.
 Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark		Ref. No.	Part No.	Description	Remark		
*	A-2006-828-A	AUDIO BOARD, COMPLETE(DECK-A)			C91	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
*	A-2006-828-A	AUDIO BOARD, COMPLETE(DECK-B)	*****		C92	1-136-157-00	FILM	0.022uF	5% 50V	
< CAPACITOR >										
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	C93	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V
C12	1-136-157-00	FILM	0.022uF	5%	50V	C94	1-136-478-11	FILM	470PF	5% 630V
C13	1-124-234-00	ELECT	22uF	20%	16V	C95	1-136-433-11	FILM	100PF	5% 630V
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	C96	1-163-143-00	CERAMIC CHIP	0.0012uF	5% 50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	C97	1-136-273-91	FILM	75PF	5% 630V
C22	1-136-157-00	FILM	0.022uF	5%	50V	C98	1-163-003-11	CERAMIC CHIP	330PF	10% 50V
C23	1-124-234-00	ELECT	22uF	20%	16V	C99	1-164-005-11	CERAMIC CHIP	0.47uF	25V
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	< CONNECTOR >				
C31	1-124-234-00	ELECT	22uF	20%	16V	* CNP31	1-580-782-11	CONNECTOR, BOARD TO BOARD		
C32	1-124-234-00	ELECT	22uF	20%	16V	* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P		
C33	1-124-234-00	ELECT	22uF	20%	16V	* CNP33	1-580-782-11	CONNECTOR, BOARD TO BOARD		
C51	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P		
C52	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	CNP72	1-764-902-11	CONNECTOR, FFC/FPC 4P		
C53	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	< DIODE >				
C54	1-136-601-11	FILM	0.01uF	5%	630V	D31	8-719-016-74	DIODE 1SS352		
C56	1-164-505-11	CERAMIC CHIP	2.2uF		16V	< IC >				
C57	1-164-346-11	CERAMIC CHIP	1uF		16V	IC31	8-759-106-02	IC uPC4570G2		
C71	1-164-346-11	CERAMIC CHIP	1uF		16V	IC81	8-759-106-56	IC uPC1297CA		
C80	1-124-234-00	ELECT	22uF	20%	16V	< COIL >				
C81	1-164-232-11	CERAMIC CHIP	0.01uF		50V	L81	1-410-780-11	INDUCTOR 27mH		
C82	1-136-157-00	FILM	0.022uF	5%	50V	L91	1-410-780-11	INDUCTOR 27mH		
C83	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	< TRANSISTOR >				
C84	1-136-478-11	FILM	470PF	5%	630V	Q51	8-729-808-01	TRANSISTOR 2SD1622-S		
C85	1-136-433-11	FILM	100PF	5%	630V	Q52	8-729-808-01	TRANSISTOR 2SD1622-S		
C86	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V	Q53	8-729-808-01	TRANSISTOR 2SD1622-S		
C87	1-136-273-91	FILM	75PF	5%	630V	Q71	8-729-216-22	TRANSISTOR 2SA1162-G		
C88	1-163-003-11	CERAMIC CHIP	330PF	10%	50V					
C89	1-124-234-00	ELECT	22uF	20%	16V					
C90	1-107-584-11	CERAMIC	4PF		500V					

AUDIO**DOLBY (S)**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< RESISTOR >							
R11	1-216-099-00	METAL CHIP	120K 5% 1/10W				
R12	1-216-025-00	METAL CHIP	100 5% 1/10W				
R13	1-216-100-00	METAL GLAZE	130K 5% 1/10W				
R14	1-216-067-00	METAL CHIP	5.6K 5% 1/10W				
R21	1-216-099-00	METAL CHIP	120K 5% 1/10W				
R22	1-216-025-00	METAL CHIP	100 5% 1/10W				
R23	1-216-100-00	METAL GLAZE	130K 5% 1/10W				
R24	1-216-067-00	METAL CHIP	5.6K 5% 1/10W				
R31	1-216-033-00	METAL CHIP	220 5% 1/10W				
R32	1-216-033-00	METAL CHIP	220 5% 1/10W				
R51	1-216-097-00	METAL CHIP	100K 5% 1/10W				
R52	1-216-097-00	METAL CHIP	100K 5% 1/10W				
R53	1-216-073-00	METAL CHIP	10K 5% 1/10W				
R54	1-216-309-00	METAL CHIP	5.6 5% 1/10W				
R55	1-216-309-00	METAL CHIP	5.6 5% 1/10W				
R57	1-216-298-00	METAL CHIP	2.2 5% 1/10W				
R71	1-216-082-00	METAL GLAZE	24K 5% 1/10W				
R72	1-216-081-00	METAL CHIP	22K 5% 1/10W				
R73	1-216-089-91	METAL GLAZE	47K 5% 1/10W				
R74	1-216-089-91	METAL GLAZE	47K 5% 1/10W				
R81	1-216-073-00	METAL CHIP	10K 5% 1/10W				
R82	1-216-085-00	METAL CHIP	33K 5% 1/10W				
R83	1-216-001-00	METAL CHIP	10 5% 1/10W				
R84	1-216-101-00	METAL CHIP	150K 5% 1/10W				
R85	1-216-075-00	METAL CHIP	12K 5% 1/10W				
R91	1-216-073-00	METAL CHIP	10K 5% 1/10W				
R92	1-216-085-00	METAL CHIP	33K 5% 1/10W				
R93	1-216-001-00	METAL CHIP	10 5% 1/10W				
R94	1-216-101-00	METAL CHIP	150K 5% 1/10W				
R95	1-216-075-00	METAL CHIP	12K 5% 1/10W				
< VARIABLE RESISTOR >							
RV11	1-241-761-11	RES, ADJ, CARBON 1K (PB LEVEL L-CH)					
RV21	1-241-761-11	RES, ADJ, CARBON 1K (PB LEVEL R-CH)					
RV71	1-241-630-11	RES, ADJ, CARBON 10K(TAPE SPEED NORMAL)					
RV72	1-241-630-11	RES, ADJ, CARBON 10K(TAPE SPEED HIGH)					
RV81	1-241-786-11	RES, ADJ, CARBON 22K(REC BIAS L-CH)					
RV91	1-241-786-11	RES, ADJ, CARBON 22K(REC BIAS R-CH)					
< RELAY >							
RY31	1-515-803-11	RELAY					
< TRANSFORMER >							
T51	1-406-417-11	COIL, BIAS OSCILLATION					
T81	1-433-381-11	TRANSFORMER, BIAS OSCILLATOR					
T91	1-433-381-11	TRANSFORMER, BIAS OSCILLATOR					
* TP81	1-568-449-11	HOUSING, CONNECTOR(PC BOARD) 3P					

*	A-2007-173-A	DOLBY (S) BOARD, COMPLETE					

< TEST PIN >							
C1	1-164-222-11	CERAMIC CHIP	0.22uF				25V
C2	1-135-177-21	TANTALUM CHIP	1uF			20%	20V
C3	1-104-558-11	FILM CHIP	0.039uF			5%	16V
C4	1-163-007-11	CERAMIC CHIP	680PF			10%	50V
C5	1-163-009-11	CERAMIC CHIP	0.001uF			10%	50V
C6	1-164-717-11	CERAMIC CHIP	0.0082uF			5%	50V
C7	1-164-222-11	CERAMIC CHIP	0.22uF			25V	
C8	1-104-562-11	FILM CHIP	0.082uF			5%	16V
C9	1-104-553-11	FILM CHIP	0.015uF			5%	16V
C10	1-165-319-11	CERAMIC CHIP	0.1uF			50V	
C11	1-135-145-11	TANTALUM CHIP	0.47uF			10%	35V
C12	1-164-222-11	CERAMIC CHIP	0.22uF			25V	
C13	1-165-319-11	CERAMIC CHIP	0.1uF			50V	
C14	1-162-568-11	CERAMIC CHIP	0.33uF			10%	16V
C15	1-104-562-11	FILM CHIP	0.082uF			5%	16V
C16	1-135-145-11	TANTALUM CHIP	0.47uF			10%	35V
C17	1-165-319-11	CERAMIC CHIP	0.1uF			50V	
C18	1-164-222-11	CERAMIC CHIP	0.22uF			25V	
C19	1-163-035-00	CERAMIC CHIP	0.047uF			50V	
C20	1-104-553-11	FILM CHIP	0.015uF			5%	16V
C21	1-164-717-11	CERAMIC CHIP	0.0082uF			5%	50V
C22	1-163-009-11	CERAMIC CHIP	0.001uF			10%	50V
C23	1-164-161-11	CERAMIC CHIP	0.0022uF			10%	100V
C24	1-163-005-11	CERAMIC CHIP	470PF			10%	50V
C25	1-163-012-00	CERAMIC CHIP	0.0018uF			10%	50V
C26	1-104-558-11	FILM CHIP	0.039uF			5%	16V
C27	1-163-012-00	CERAMIC CHIP	0.0018uF			10%	50V
C28	1-163-012-00	CERAMIC CHIP	0.0018uF			10%	50V
C29	1-104-563-11	FILM CHIP	0.1uF			5%	16V
C30	1-135-145-11	TANTALUM CHIP	0.47uF			10%	35V
C31	1-104-555-11	FILM CHIP	0.022uF			5%	16V
C32	1-104-563-11	FILM CHIP	0.1uF			5%	16V
C33	1-163-024-00	CERAMIC CHIP	0.018uF			10%	50V
C34	1-104-563-11	FILM CHIP	0.1uF			5%	16V
C35	1-163-012-00	CERAMIC CHIP	0.0018uF			10%	50V
C36	1-165-319-11	CERAMIC CHIP	0.1uF			50V	
C37	1-164-222-11	CERAMIC CHIP	0.22uF			25V	
C38	1-163-024-00	CERAMIC CHIP	0.018uF			10%	50V
C39	1-104-555-11	FILM CHIP	0.022uF			5%	16V
C40	1-104-563-11	FILM CHIP	0.1uF			5%	16V

DOLBY (S) MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark				
< CONNECTOR >											
CN1	1-695-092-11	SOCKET, CONNECTOR 7P		R41	1-216-680-11	METAL CHIP	16K 0.5% 1/10W				
< IC >											
IC1	8-752-056-51	IC CXA1417Q		R42	1-216-673-11	METAL CHIP	8.2K 0.5% 1/10W				
< RESISTOR >											
R1	1-208-353-41	METAL GLAZE	33 2% 1/10W	R43	1-216-676-11	METAL CHIP	11K 0.5% 1/10W				
R2	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	R44	1-216-689-11	METAL CHIP	39K 0.5% 1/10W				
R3	1-208-812-11	METAL GLAZE	18K 2% 1/10W	R45	1-216-689-11	METAL CHIP	39K 0.5% 1/10W				
R4	1-208-556-41	METAL GLAZE	820K 2% 1/10W	*****							
R5	1-216-668-11	METAL CHIP	5.1K 0.5% 1/10W	* A-2007-194-A MAIN BOARD, COMPLETE (WR745S:AEP, German, WR801ES)							
R6	1-208-442-41	METAL GLAZE	1.6K 2% 1/10W	* A-2007-196-A MAIN BOARD, COMPLETE(AUS)							
R7	1-216-657-11	METAL CHIP	1.8K 0.5% 1/10W	* A-2007-197-A MAIN BOARD, COMPLETE(E) *****							
R8	1-216-667-11	METAL CHIP	4.7K 0.5% 1/10W	7-685-646-79 SCREW +BVTP 3X8 TYPE2 IT-3 7-682-547-09 SCREW +BVTT 3X6 (S)							
R9	1-208-446-41	METAL GLAZE	2.4K 2% 1/10W	< CAPACITOR >							
R10	1-208-440-41	METAL GLAZE	1.3K 2% 1/10W	C101	1-124-927-11	ELECT	4.7uF 20% 100V				
R11	1-208-353-41	METAL GLAZE	33 2% 1/10W	C102	1-124-907-11	ELECT	10uF 20% 50V				
R12	1-208-357-41	METAL GLAZE	47 2% 1/10W	C103	1-130-476-00	MYLAR	0.0027uF 5% 50V				
R13	1-216-653-11	METAL CHIP	1.2K 0.5% 1/10W	C104	1-162-294-31	CERAMIC	0.001uF 10% 50V				
R14	1-216-667-11	METAL CHIP	4.7K 0.5% 1/10W	C105	1-124-907-11	ELECT	10uF 20% 50V				
R15	1-208-446-41	METAL GLAZE	2.4K 2% 1/10W	C106	1-124-907-11	ELECT	10uF 20% 50V				
R16	1-208-353-41	METAL GLAZE	33 2% 1/10W	C107	1-136-165-00	FILM	0.1uF 5% 50V				
R17	1-208-357-41	METAL GLAZE	47 2% 1/10W	C108	1-136-163-00	FILM	0.068uF 5% 50V				
R18	1-216-657-11	METAL CHIP	1.8K 0.5% 1/10W	C109	1-124-907-11	ELECT	10uF 20% 50V				
R19	1-208-442-41	METAL GLAZE	1.6K 2% 1/10W	C121	1-124-927-11	ELECT	4.7uF 20% 100V				
R20	1-216-668-11	METAL CHIP	5.1K 0.5% 1/10W	C122	1-162-282-31	CERAMIC	100PF 10% 50V				
R21	1-208-556-41	METAL GLAZE	820K 2% 1/10W	C131	1-124-916-11	ELECT	22uF 20% 63V				
R22	1-216-655-11	METAL CHIP	1.5K 0.5% 1/10W	C132	1-124-907-11	ELECT	10uF 20% 50V				
R23	1-216-678-11	METAL CHIP	13K 0.5% 1/10W	C141	1-126-962-11	ELECT	3.3uF 20% 50V				
R24	1-216-673-11	METAL CHIP	8.2K 0.5% 1/10W	C142	1-124-902-00	ELECT	0.47uF 20% 50V				
R25	1-216-675-11	METAL CHIP	10K 0.5% 1/10W	C143	1-124-927-11	ELECT	4.7uF 20% 100V				
R26	1-216-676-11	METAL CHIP	11K 0.5% 1/10W	C151	1-124-907-11	ELECT	10uF 20% 50V				
R27	1-216-668-11	METAL CHIP	5.1K 0.5% 1/10W	C152	1-124-925-11	ELECT	2.2uF 20% 100V				
R28	1-216-695-11	METAL CHIP	68K 0.5% 1/10W	C153	1-164-159-11	CERAMIC	0.1uF 50V				
R29	1-216-668-11	METAL CHIP	5.1K 0.5% 1/10W	C154	1-124-902-00	ELECT	0.47uF 20% 50V				
R30	1-208-446-41	METAL GLAZE	2.4K 2% 1/10W	C155	1-124-927-11	ELECT	4.7uF 20% 100V				
R31	1-216-680-11	METAL CHIP	16K 0.5% 1/10W	C156	1-124-927-11	ELECT	4.7uF 20% 100V				
R32	1-216-685-11	METAL CHIP	27K 0.5% 1/10W	C157	1-124-925-11	ELECT	2.2uF 20% 100V				
R33	1-208-469-41	METAL GLAZE	20K 2% 1/10W	C158	1-124-443-00	ELECT	100uF 20% 10V				
R34	1-216-684-11	METAL CHIP	24K 0.5% 1/10W	C161	1-124-927-11	ELECT	4.7uF 20% 100V				
R35	1-208-521-41	METAL GLAZE	30K 2% 1/10W	C201	1-124-927-11	ELECT	4.7uF 20% 100V				
R36	1-208-521-41	METAL GLAZE	30K 2% 1/10W	C202	1-124-907-11	ELECT	10uF 20% 50V				
R37	1-216-676-11	METAL CHIP	11K 0.5% 1/10W	C203	1-130-476-00	MYLAR	0.0027uF 5% 50V				
R38	1-208-523-41	METAL GLAZE	36K 2% 1/10W	C204	1-162-294-31	CERAMIC	0.001uF 10% 50V				
R39	1-216-668-11	METAL CHIP	5.1K 0.5% 1/10W	C205	1-124-907-11	ELECT	10uF 20% 50V				
R40	1-208-521-41	METAL GLAZE	30K 2% 1/10W	C206	1-124-907-11	ELECT	10uF 20% 50V				
				C207	1-136-165-00	FILM	0.1uF 5% 50V				
				C208	1-136-163-00	FILM	0.068uF 5% 50V				

MAIN

Ref. No.	Part No.	Description		Remark	Ref. No.	Part No.	Description		Remark		
C209	1-124-907-11	ELECT	10uF	20%	50V	C707	1-124-473-11	ELECT	1000uF	20%	10V
C221	1-124-927-11	ELECT	4.7uF	20%	100V	C708	1-124-927-11	ELECT	4.7uF	20%	100V
C222	1-162-282-31	CERAMIC	100PF	10%	50V	C709	1-124-927-11	ELECT	4.7uF	20%	100V
C231	1-124-916-11	ELECT	22uF	20%	63V	C710	1-124-472-11	ELECT	470uF	20%	10V
C232	1-124-907-11	ELECT	10uF	20%	50V	C711	1-124-910-11	ELECT	47uF	20%	50V
C241	1-126-962-11	ELECT	3.3uF	20%	50V	C801	1-124-443-00	ELECT	100uF	20%	10V
C242	1-124-902-00	ELECT	0.47uF	20%	50V	C802	1-164-159-11	CERAMIC	0.1uF	20%	50V
C243	1-124-927-11	ELECT	4.7uF	20%	100V	C804	1-124-902-00	ELECT	0.47uF	20%	50V
C251	1-124-907-11	ELECT	10uF	20%	50V	C805	1-161-494-00	CERAMIC	0.022uF	25V	
C252	1-124-925-11	ELECT	2.2uF	20%	100V	C806	1-161-494-00	CERAMIC	0.022uF	25V	
C253	1-164-159-11	CERAMIC	0.1uF		50V	C807	1-161-494-00	CERAMIC	0.022uF		25V
C254	1-124-902-00	ELECT	0.47uF	20%	50V	C808	1-161-494-00	CERAMIC	0.022uF		25V
C255	1-124-927-11	ELECT	4.7uF	20%	100V	C809	1-161-494-00	CERAMIC	0.022uF		25V
C256	1-124-927-11	ELECT	4.7uF	20%	100V	C810	1-164-159-11	CERAMIC	0.1uF		50V
C257	1-124-925-11	ELECT	2.2uF	20%	100V	C821	1-124-907-11	ELECT	10uF	20%	50V
C258	1-124-443-00	ELECT	100uF	20%	10V	C841	1-124-907-11	ELECT	10uF	20%	50V
C261	1-124-927-11	ELECT	4.7uF	20%	100V	C861	1-162-294-31	CERAMIC	0.001uF	10%	50V
C501	1-130-476-00	MYLAR	0.0027uF	5%	50V	C862	1-162-294-31	CERAMIC	0.001uF	10%	50V
C502	1-136-164-00	FILM	0.082uF	5%	50V				(WR745S:AEP, German, WR801)		
C503	1-136-161-00	FILM	0.047uF	5%	50V	C864	1-162-294-31	CERAMIC	0.001uF	10%	50V (E)
C504	1-130-475-00	MYLAR	0.0022uF	5%	50V				< CONNECTOR >		
C511	1-124-907-11	ELECT	10uF	20%	50V	CN131	1-695-087-11	PIN, CONNECTOR (PC BOARD)	7P		
C512	1-124-907-11	ELECT	10uF	20%	50V	CN231	1-695-087-11	PIN, CONNECTOR (PC BOARD)	7P		
C513	1-124-907-11	ELECT	10uF	20%	50V	* CN501	1-691-916-11	CONNECTOR, BOARD TO BOARD			
C514	1-124-907-11	ELECT	10uF	20%	50V	* CN502	1-691-916-11	CONNECTOR, BOARD TO BOARD			
C515	1-124-903-11	ELECT	1uF	20%	50V				(CONNECTOR BOARD)		
C521	1-124-916-11	ELECT	22uF	20%	63V	* CN503	1-691-916-11	CONNECTOR, BOARD TO BOARD			
C541	1-124-443-00	ELECT	100uF	20%	10V						
C542	1-124-443-00	ELECT	100uF	20%	10V	* CN504	1-691-916-11	CONNECTOR, BOARD TO BOARD			
C544	1-124-902-00	ELECT	0.47uF	20%	50V	CN505	1-750-414-11	CONNECTOR, FFC/FPC 9P			
C545	1-124-443-00	ELECT	100uF	20%	10V	CN506	1-568-826-11	CONNECTOR, FFC/FPC 7P			
C547	1-124-916-11	ELECT	22uF	20%	63V	CN701	1-766-280-11	PIN, CONNECTOR (PC BOARD)	7P		
C548	1-124-902-00	ELECT	0.47uF	20%	50V	CN801	1-506-468-11	PIN, CONNECTOR 3P			
C549	1-124-925-11	ELECT	2.2uF	20%	100V	* CN802	1-568-954-11	PIN, CONNECTOR 5P			
C571	1-124-360-00	ELECT	1000uF	20%	16V	* CN803	1-568-954-11	PIN, CONNECTOR 5P			
C572	1-124-360-00	ELECT	1000uF	20%	16V	CN804	1-750-442-11	CONNECTOR, FFC/FPC 37P			
C573	1-124-360-00	ELECT	1000uF	20%	16V	CN805	1-568-826-11	CONNECTOR, FFC/FPC 7P			
C574	1-124-902-00	ELECT	0.47uF	20%	50V	CN806	1-568-826-11	CONNECTOR, FFC/FPC 7P			
C581	1-126-916-11	ELECT	1000uF	20%	6.3V				< CONNECTOR >		
C601	1-164-159-11	CERAMIC	0.1uF		50V						
C602	1-164-159-11	CERAMIC	0.1uF		50V	CNP505	1-750-414-11	CONNECTOR, FFC/FPC 9P (CONNECTOR BOARD)			
C603	1-162-288-31	CERAMIC	330PF	10%	50V	CNP701	1-766-280-11	PIN, CONNECTOR (PC BOARD)	7P		
C604	1-162-288-31	CERAMIC	330PF	10%	50V				(POWER TRANFOR BOARD)		
C701	1-124-898-11	ELECT	4700uF	20%	16V	* CNP702	1-580-230-31	PIN, CONNECTOR (PC BOARD)	2P		
C702	1-124-898-11	ELECT	4700uF	20%	16V				(WR745S:AEP, German, AUS/WR801ES)		
C703	1-124-903-11	ELECT	1uF	20%	50V				< DIODE >		
C704	1-124-122-11	ELECT	100uF	20%	50V	D151	8-719-933-33	DIODE	HZS6A1L		
C705	1-124-927-11	ELECT	4.7uF	20%	100V	D251	8-719-933-33	DIODE	HZS6A1L		
C706	1-124-762-00	ELECT	4700uF	20%	10V	D501	8-719-987-63	DIODE	1N4148M		

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D502	8-719-987-63	DIODE	1N4148M			< JACK >	
D511	8-719-200-82	DIODE	11ES2	J501	1-565-258-11	JACK, PIN 4P(LINE IN/OUT)	
D512	8-719-200-82	DIODE	11ES2			< COIL >	
D513	8-719-200-82	DIODE	11ES2	* L601	1-420-872-00	COIL, AIR CORE	
D514	8-719-200-82	DIODE	11ES2	* L602	1-420-872-00	COIL, AIR CORE	
D541	8-719-987-63	DIODE	1N4148M			< FILTER >	
D571	8-719-987-63	DIODE	1N4148M	LPF101	1-231-388-00	FILTER, LOW PASS	
D572	8-719-987-63	DIODE	1N4148M	LPF201	1-231-388-00	FILTER, LOW PASS	
D701	8-719-200-77	DIODE	10E2N			< TRANSISTOR >	
D702	8-719-200-77	DIODE	10E2N	Q101	8-729-900-74	TRANSISTOR	DTC143TS
D703	8-719-200-77	DIODE	10E2N	Q121	8-729-900-74	TRANSISTOR	DTC143TS
D704	8-719-200-77	DIODE	10E2N	Q161	8-729-922-37	TRANSISTOR	2SD2144S
D705	8-719-987-63	DIODE	1N4148M	Q201	8-729-900-74	TRANSISTOR	DTC143TS
D706	8-719-987-63	DIODE	1N4148M	Q221	8-729-900-74	TRANSISTOR	DTC143TS
D707	8-719-200-77	DIODE	10E2N	Q261	8-729-922-37	TRANSISTOR	2SD2144S
D708	8-719-987-63	DIODE	1N4148M	Q501	8-729-620-05	TRANSISTOR	2SC2603-EF
D709	8-719-933-33	DIODE	HZS6A1L	Q502	8-729-620-05	TRANSISTOR	2SC2603-EF
D710	8-719-933-33	DIODE	HZS6A1L	Q511	8-729-900-65	TRANSISTOR	DTA144ES
D711	8-719-933-33	DIODE	HZS6A1L	Q512	8-729-900-65	TRANSISTOR	DTA144ES
D712	8-719-000-78	DIODE	UZL-7L2	Q513	8-729-900-65	TRANSISTOR	DTA144ES
D713	8-719-987-63	DIODE	1N4148M	Q514	8-729-900-65	TRANSISTOR	DTA144ES
D714	8-719-987-63	DIODE	1N4148M	Q515	8-729-900-65	TRANSISTOR	DTA144ES
D715	8-719-987-63	DIODE	1N4148M	Q516	8-729-900-65	TRANSISTOR	DTA144ES
D716	8-719-000-78	DIODE	UZL-7L2	Q521	8-729-900-61	TRANSISTOR	DTA144ES
D801	8-719-987-63	DIODE	1N4148M	Q522	8-729-900-80	TRANSISTOR	DTC114ES
D802	8-719-987-63	DIODE	1N4148M	Q523	8-729-900-89	TRANSISTOR	DTC144ES
D803	8-719-987-63	DIODE	1N4148M	Q541	8-729-620-05	TRANSISTOR	2SC2603-EF
D804	8-719-987-63	DIODE	1N4148M	Q542	8-729-119-76	TRANSISTOR	2SA1175-HFE
				Q544	8-729-900-65	TRANSISTOR	DTA144ES
IC501	8-759-145-58	IC	uPC4558C	Q545	8-729-900-89	TRANSISTOR	DTC144ES
IC502	8-759-634-50	IC	M5218AL	Q546	8-729-620-05	TRANSISTOR	2SC2603-EF
IC503	8-752-066-35	IC	CXA1563S	Q581	8-729-119-76	TRANSISTOR	2SA1175-HFE
IC504	8-759-145-58	IC	uPC4558C	Q601	8-729-801-93	TRANSISTOR	2SD1387
IC505	8-752-055-61	IC	CXA1578P	Q602	8-729-801-93	TRANSISTOR	2SD1387
IC506	8-752-058-57	IC	CXA1599Q	Q603	8-729-900-80	TRANSISTOR	DTC114ES
IC507	8-759-634-50	IC	M5218AL	Q701	8-729-141-83	TRANSISTOR	2SB1094-LK
IC601	8-759-207-05	IC	TA7272P	Q702	8-729-209-15	TRANSISTOR	2SD2012
IC701	8-759-145-58	IC	uPC4558C	Q703	8-729-209-15	TRANSISTOR	2SD2012
IC801	8-752-853-35	IC	CXP82220-021Q	Q704	8-729-620-05	TRANSISTOR	2SC2603-EF
IC802	8-759-000-48	IC	MC14052BCP	Q705	8-729-900-80	TRANSISTOR	DTC114ES
IC803	8-759-165-82	IC	PST600E-T	Q706	8-729-900-80	TRANSISTOR	DTC114ES
IC804	8-759-000-48	IC	MC14052BCP	Q707	8-729-119-76	TRANSISTOR	2SA1175-HFE
IC805	8-759-916-14	IC	SN74HC04AN	Q708	8-729-140-04	TRANSISTOR	2SB1116A-L
IC806	8-759-000-48	IC	MC14052BCP	Q801	8-729-900-80	TRANSISTOR	DTC114ES
IC807	8-759-916-14	IC	SN74HC04AN				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q802	8-729-900-89	TRANSISTOR	DTC144ES	R211	1-249-431-11	CARBON	15K 5% 1/4W
Q821	8-729-900-61	TRANSISTOR	DTA114ES	R212	1-249-429-11	CARBON	10K 5% 1/4W
Q822	8-729-900-80	TRANSISTOR	DTC114ES	R221	1-249-437-11	CARBON	47K 5% 1/4W
Q823	8-729-119-76	TRANSISTOR	2SA1175-HFE	R222	1-247-846-11	CARBON	4.3K 5% 1/4W
Q841	8-729-900-61	TRANSISTOR	DTA114ES	R223	1-249-435-11	CARBON	33K 5% 1/4W
Q842	8-729-900-80	TRANSISTOR	DTC114ES	R224	1-249-425-11	CARBON	4.7K 5% 1/4W
Q843	8-729-119-76	TRANSISTOR	2SA1175-HFE	R225	1-249-429-11	CARBON	10K 5% 1/4W
< RESISTOR >				R251	1-247-807-31	CARBON	100 5% 1/4W
R101	1-249-437-11	CARBON	47K 5% 1/4W	R252	1-247-807-31	CARBON	100 5% 1/4W
R102	1-249-429-11	CARBON	10K 5% 1/4W	R253	1-249-439-11	CARBON	68K 5% 1/4W
R103	1-249-433-11	CARBON	22K 5% 1/4W	R254	1-249-421-11	CARBON	2.2K 5% 1/4W
R104	1-249-423-11	CARBON	3.3K 5% 1/4W	R256	1-249-409-11	CARBON	220 5% 1/4W
R105	1-249-441-11	CARBON	100K 5% 1/4W	R257	1-247-887-00	CARBON	220K 5% 1/4W
R106	1-249-428-11	CARBON	8.2K 5% 1/4W	R261	1-249-434-11	CARBON	27K 5% 1/4W
R107	1-249-432-11	CARBON	18K 5% 1/4W	R262	1-249-441-11	CARBON	100K 5% 1/4W
R108	1-249-421-11	CARBON	2.2K 5% 1/4W	R263	1-249-435-11	CARBON	33K 5% 1/4W
R109	1-249-433-11	CARBON	22K 5% 1/4W	R264	1-249-417-11	CARBON	1K 5% 1/4W
R110	1-249-425-11	CARBON	4.7K 5% 1/4W	R265	1-249-421-11	CARBON	2.2K 5% 1/4W
R111	1-249-431-11	CARBON	15K 5% 1/4W	R266	1-247-887-00	CARBON	220K 5% 1/4W
R112	1-249-429-11	CARBON	10K 5% 1/4W	R267	1-249-421-11	CARBON	2.2K 5% 1/4W
R121	1-249-437-11	CARBON	47K 5% 1/4W	R501	1-249-433-11	CARBON	22K 5% 1/4W
R122	1-247-846-11	CARBON	4.3K 5% 1/4W	R502	1-249-426-11	CARBON	5.6K 5% 1/4W
R123	1-249-435-11	CARBON	33K 5% 1/4W	R503	1-249-436-11	CARBON	39K 5% 1/4W
R124	1-249-425-11	CARBON	4.7K 5% 1/4W	R504	1-249-441-11	CARBON	100K 5% 1/4W
R125	1-249-429-11	CARBON	10K 5% 1/4W	R505	1-249-441-11	CARBON	100K 5% 1/4W
R151	1-247-807-31	CARBON	100 5% 1/4W	R506	1-247-846-11	CARBON	4.3K 5% 1/4W
R152	1-247-807-31	CARBON	100 5% 1/4W	R507	1-249-425-11	CARBON	4.7K 5% 1/4W
R153	1-249-439-11	CARBON	68K 5% 1/4W	R508	1-249-425-11	CARBON	4.7K 5% 1/4W
R154	1-249-421-11	CARBON	2.2K 5% 1/4W	R511	1-215-452-00	METAL	20K 1% 1/6W
R156	1-249-409-11	CARBON	220 5% 1/4W	R512	1-249-417-11	CARBON	1K 5% 1/4W
R157	1-247-887-00	CARBON	220K 5% 1/4W	R513	1-249-433-11	CARBON	22K 5% 1/4W
R161	1-249-434-11	CARBON	27K 5% 1/4W	R514	1-249-435-11	CARBON	33K 5% 1/4W
R162	1-249-441-11	CARBON	100K 5% 1/4W	R515	1-249-433-11	CARBON	22K 5% 1/4W
R163	1-249-435-11	CARBON	33K 5% 1/4W	R516	1-249-433-11	CARBON	22K 5% 1/4W
R164	1-249-417-11	CARBON	1K 5% 1/4W	R517	1-249-435-11	CARBON	33K 5% 1/4W
R165	1-249-421-11	CARBON	2.2K 5% 1/4W	R521	1-215-455-00	METAL	27K 1% 1/6W
R166	1-247-887-00	CARBON	220K 5% 1/4W	R522	1-249-422-11	CARBON	2.7K 5% 1/4W
R167	1-249-421-11	CARBON	2.2K 5% 1/4W	R523	1-249-413-11	CARBON	470 5% 1/4W
R201	1-249-437-11	CARBON	47K 5% 1/4W	R524	1-249-429-11	CARBON	10K 5% 1/4W
R202	1-249-429-11	CARBON	10K 5% 1/4W	R525	1-249-441-11	CARBON	100K 5% 1/4W
R203	1-249-433-11	CARBON	22K 5% 1/4W	R526	1-249-429-11	CARBON	10K 5% 1/4W
R204	1-249-423-11	CARBON	3.3K 5% 1/4W	R527	1-247-852-11	CARBON	7.5K 5% 1/4W
R205	1-249-441-11	CARBON	100K 5% 1/4W	R528	1-247-852-11	CARBON	7.5K 5% 1/4W
R206	1-249-428-11	CARBON	8.2K 5% 1/4W	R529	1-247-852-11	CARBON	7.5K 5% 1/4W
R207	1-249-432-11	CARBON	18K 5% 1/4W	R530	1-247-858-11	CARBON	13K 5% 1/4W
R208	1-249-421-11	CARBON	2.2K 5% 1/4W	R531	1-249-429-11	CARBON	10K 5% 1/4W
R209	1-249-433-11	CARBON	22K 5% 1/4W	R532	1-249-429-11	CARBON	10K 5% 1/4W
R210	1-249-425-11	CARBON	4.7K 5% 1/4W	R533	1-249-422-11	CARBON	2.7K 5% 1/4W
				R534	1-249-426-11	CARBON	5.6K 5% 1/4W

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R541	1-215-455-00	METAL	27K 1% 1/6W	R709	1-249-425-11	CARBON	4.7K 5% 1/4W
△R542	1-212-863-00	FUSIBLE	18 5% 1/4W F	R710	1-249-417-11	CARBON	1K 5% 1/4W
R543	1-249-432-11	CARBON	18K 5% 1/4W	R711	1-249-427-11	CARBON	6.8K 5% 1/4W
R544	1-249-430-11	CARBON	12K 5% 1/4W	R712	1-249-427-11	CARBON	6.8K 5% 1/4W
R545	1-249-417-11	CARBON	1K 5% 1/4W	R713	1-249-417-11	CARBON	1K 5% 1/4W
R546	1-249-425-11	CARBON	4.7K 5% 1/4W	R714	1-249-429-11	CARBON	10K 5% 1/4W
R547	1-249-413-11	CARBON	470 5% 1/4W	R715	1-249-422-11	CARBON	2.7K 5% 1/4W
R548	1-249-429-11	CARBON	10K 5% 1/4W	R716	1-249-433-11	CARBON	22K 5% 1/4W
R549	1-249-429-11	CARBON	10K 5% 1/4W	R717	1-249-429-11	CARBON	10K 5% 1/4W
R550	1-249-429-11	CARBON	10K 5% 1/4W	R718	1-249-436-11	CARBON	39K 5% 1/4W
R551	1-249-417-11	CARBON	1K 5% 1/4W	R719	1-249-430-11	CARBON	12K 5% 1/4W
R552	1-247-872-11	CARBON	51K 5% 1/4W	△R720	1-219-136-11	FUSIBLE	0.22 10% 1/4W
R554	1-249-429-11	CARBON	10K 5% 1/4W	△R721	1-219-136-11	FUSIBLE	0.22 10% 1/4W
R555	1-247-840-00	CARBON	2.4K 5% 1/4W	△R722	1-219-136-11	FUSIBLE	0.22 10% 1/4W
R556	1-249-437-11	CARBON	47K 5% 1/4W	R801	1-249-441-11	CARBON	100K 5% 1/4W
R557	1-247-852-11	CARBON	7.5K 5% 1/4W	R802	1-249-417-11	CARBON	1K 5% 1/4W
R558	1-247-852-11	CARBON	7.5K 5% 1/4W	R803	1-249-435-11	CARBON	33K 5% 1/4W
R559	1-247-858-11	CARBON	13K 5% 1/4W	R804	1-247-807-31	CARBON	100 5% 1/4W
R560	1-249-425-11	CARBON	4.7K 5% 1/4W	R805	1-247-807-31	CARBON	100 5% 1/4W
R561	1-249-430-11	CARBON	12K 5% 1/4W	R806	1-247-807-31	CARBON	100 5% 1/4W
R562	1-249-430-11	CARBON	12K 5% 1/4W	R807	1-247-807-31	CARBON	100 5% 1/4W
R563	1-249-422-11	CARBON	2.7K 5% 1/4W	R808	1-249-429-11	CARBON	10K 5% 1/4W
R564	1-249-426-11	CARBON	5.6K 5% 1/4W	R809	1-249-429-11	CARBON	10K 5% 1/4W
R581	1-249-437-11	CARBON	47K 5% 1/4W	R810	1-247-807-31	CARBON	100 5% 1/4W
R582	1-249-429-11	CARBON	10K 5% 1/4W	R811	1-247-807-31	CARBON	100 5% 1/4W
R583	1-249-437-11	CARBON	47K 5% 1/4W	R812	1-247-807-31	CARBON	100 5% 1/4W
R584	1-249-413-11	CARBON	470 5% 1/4W	R813	1-247-807-31	CARBON	100 5% 1/4W
R601	1-247-807-31	CARBON	100 5% 1/4W	R814	1-249-429-11	CARBON	10K 5% 1/4W
R602	1-247-807-31	CARBON	100 5% 1/4W	R815	1-249-429-11	CARBON	10K 5% 1/4W
R603	1-249-433-11	CARBON	22K 5% 1/4W	R816	1-249-429-11	CARBON	10K 5% 1/4W
R604	1-249-433-11	CARBON	22K 5% 1/4W	R817	1-247-807-31	CARBON	100 5% 1/4W
R605	1-249-433-11	CARBON	22K 5% 1/4W	R818	1-249-441-11	CARBON	100K 5% 1/4W
R606	1-249-433-11	CARBON	22K 5% 1/4W	R819	1-249-441-11	CARBON	100K 5% 1/4W
R607	1-249-430-11	CARBON	12K 5% 1/4W	R821	1-247-862-11	CARBON	20K 5% 1/4W
R608	1-249-430-11	CARBON	12K 5% 1/4W	R822	1-249-426-11	CARBON	5.6K 5% 1/4W
R609	1-249-433-11	CARBON	22K 5% 1/4W	R824	1-249-421-11	CARBON	2.2K 5% 1/4W
R610	1-249-433-11	CARBON	22K 5% 1/4W	R825	1-247-852-11	CARBON	7.5K 5% 1/4W
R611	1-249-421-11	CARBON	2.2K 5% 1/4W	R826	1-249-431-11	CARBON	15K 5% 1/4W
R612	1-249-421-11	CARBON	2.2K 5% 1/4W	R827	1-247-866-11	CARBON	30K 5% 1/4W
R613	1-249-429-11	CARBON	10K 5% 1/4W	R828	1-247-874-11	CARBON	62K 5% 1/4W
R614	1-249-429-11	CARBON	10K 5% 1/4W	R829	1-249-429-11	CARBON	10K 5% 1/4W
R701	1-249-414-11	CARBON	560 5% 1/4W	R830	1-249-429-11	CARBON	10K 5% 1/4W
R702	1-249-429-11	CARBON	10K 5% 1/4W	R831	1-249-429-11	CARBON	10K 5% 1/4W
R703	1-249-422-11	CARBON	2.7K 5% 1/4W	R832	1-249-429-11	CARBON	10K 5% 1/4W
R704	1-249-425-11	CARBON	4.7K 5% 1/4W	R833	1-249-434-11	CARBON	27K 5% 1/4W
R705	1-249-427-11	CARBON	6.8K 5% 1/4W	R834	1-249-434-11	CARBON	27K 5% 1/4W
R706	1-249-419-11	CARBON	1.5K 5% 1/4W	R835	1-249-434-11	CARBON	27K 5% 1/4W
R707	1-249-429-11	CARBON	10K 5% 1/4W	R836	1-249-434-11	CARBON	27K 5% 1/4W
R708	1-249-419-11	CARBON	1.5K 5% 1/4W	R837	1-249-422-11	CARBON	2.7K 5% 1/4W

The components identified by mark or dotted line with mark are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

MAIN **PANEL**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R838	1-249-422-11	CARBON	2.7K 5% 1/4W	S936	1-570-855-11	SWITCH, SLIDE(DOLBY NR B/C/S) (SWITCH BOARD)	
R839	1-249-422-11	CARBON	2.7K 5% 1/4W	S945	1-570-855-11	SWITCH, SLIDE(DIR MODE) (SWITCH BOARD)	
R841	1-249-432-11	CARBON	18K 5% 1/4W			< TEST PIN >	
R842	1-249-425-11	CARBON	4.7K 5% 1/4W	* TP501	1-564-506-11	PLUG, CONNECTOR 3P	
R844	1-249-421-11	CARBON	2.2K 5% 1/4W	* TP801	1-564-505-11	PLUG, CONNECTOR 2P	
R845	1-247-852-11	CARBON	7.5K 5% 1/4W			< CRYSTAL >	
R846	1-249-431-11	CARBON	15K 5% 1/4W	X801	1-579-175-11	VIBRATOR, CERAMIC(10MHz)	
R847	1-247-866-11	CARBON	30K 5% 1/4W			*****	
R848	1-247-874-11	CARBON	62K 5% 1/4W	* A-2007-195-A	PANEL BOARD, COMPLETE	*****	
R849	1-249-429-11	CARBON	10K 5% 1/4W			*****	
R850	1-249-429-11	CARBON	10K 5% 1/4W			< CAPACITOR >	
R851	1-249-429-11	CARBON	10K 5% 1/4W	C591	1-164-159-11	CERAMIC	0.1uF 50V (HEADPHONE BOARD)
R852	1-249-429-11	CARBON	10K 5% 1/4W			< CONNECTOR >	
R853	1-249-434-11	CARBON	27K 5% 1/4W	CNP507	1-568-850-11	CONNECTOR, FFC/FPC 7P	
R854	1-249-434-11	CARBON	27K 5% 1/4W	CNP804	1-750-478-11	CONNECTOR, FFC/FPC 37P	
R855	1-249-434-11	CARBON	27K 5% 1/4W			< IC >	
R856	1-249-434-11	CARBON	27K 5% 1/4W	IC901	8-741-100-48	IC SBX1610-59	
R857	1-249-422-11	CARBON	2.7K 5% 1/4W	IC901	8-741-810-59	IC ELEMENT, RAY-CATCHER SBX1810-59	
R858	1-249-422-11	CARBON	2.7K 5% 1/4W			< JACK >	
R859	1-249-422-11	CARBON	2.7K 5% 1/4W	J801	1-507-796-71	JACK(PHONES) (HEADPHONE BOARD)	
R861	1-249-421-11	CARBON	2.2K 5% 1/4W			< RESISTOR >	
R862	1-249-421-11	CARBON	2.2K 5% 1/4W	R911	1-249-418-11	CARBON	1.2K 5% 1/4W
R863	1-249-421-11	CARBON	2.2K 5% 1/4W	R912	1-249-420-11	CARBON	1.8K 5% 1/4W
R864	1-249-434-11	CARBON	27K 5% 1/4W	R913	1-249-422-11	CARBON	2.7K 5% 1/4W
R865	1-249-421-11	CARBON	2.2K 5% 1/4W	R914	1-249-424-11	CARBON	3.9K 5% 1/4W
R866	1-249-421-11	CARBON	2.2K 5% 1/4W	R915	1-249-427-11	CARBON	6.8K 5% 1/4W
R867	1-249-421-11	CARBON	2.2K 5% 1/4W	R916	1-249-431-11	CARBON	15K 5% 1/4W
R868	1-249-434-11	CARBON	27K 5% 1/4W	R917	1-249-437-11	CARBON	47K 5% 1/4W
R869	1-249-421-11	CARBON	2.2K 5% 1/4W	R921	1-249-418-11	CARBON	1.2K 5% 1/4W
R870	1-249-421-11	CARBON	2.2K 5% 1/4W	R922	1-249-420-11	CARBON	1.8K 5% 1/4W
R871	1-249-433-11	CARBON	22K 5% 1/4W	R923	1-249-422-11	CARBON	2.7K 5% 1/4W
R872	1-249-429-11	CARBON	10K 5% 1/4W(E, AUS)	R924	1-249-424-11	CARBON	3.9K 5% 1/4W
R873	1-249-433-11	CARBON	22K 5% 1/4W	R925	1-249-427-11	CARBON	6.8K 5% 1/4W
R874	1-249-429-11	CARBON	10K 5% 1/4W	R926	1-249-431-11	CARBON	15K 5% 1/4W
R935	1-249-427-11	CARBON	6.8K 5% 1/4W	R927	1-249-437-11	CARBON	47K 5% 1/4W
R936	1-249-431-11	CARBON	15K 5% 1/4W	R931	1-249-418-11	CARBON	1.2K 5% 1/4W
R945	1-249-427-11	CARBON	6.8K 5% 1/4W	R932	1-249-420-11	CARBON	1.8K 5% 1/4W
			< VARIABLE RESISTOR >	R933	1-249-422-11	CARBON	2.7K 5% 1/4W
RV101	1-241-765-11	RES, ADJ, CARBON	22K(REC LEVEL L-CH)				
RV102	1-241-765-11	RES, ADJ, CARBON	22K(REC LEVEL R-CH)				
RV201	1-241-765-11	RES, ADJ, CARBON	22K(REC LEVEL L-CH)				
RV202	1-241-765-11	RES, ADJ, CARBON	22K(REC LEVEL R-CH)				
			< SWITCH >				
S801	1-554-118-00	SWITCH, PUSH (1 KEY)	(POWER ON/OFF) (POWER SWITCH BOARD)				
S935	1-570-837-11	SWITCH, SLIDE(DOLBY NR ON/OFF)	(SWITCH BOARD)				

PANEL SW-A, SW-B

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R934	1-249-424-11	CARBON	3.9K 5% 1/4W	*	1-634-841-14	SW-A BOARD(DECK-A)	
R941	1-249-418-11	CARBON	1.2K 5% 1/4W	*	1-634-841-14	SW-B BOARD(DECK-B)	*****
R942	1-249-420-11	CARBON	1.8K 5% 1/4W				< CONNECTOR >
R943	1-249-422-11	CARBON	2.7K 5% 1/4W	* CNP81	1-568-850-11	SOCKET, CONNECTOR 7P	
R944	1-249-424-11	CARBON	3.9K 5% 1/4W			< IC >	
R951	1-249-418-11	CARBON	1.2K 5% 1/4W	IC81	8-749-924-10	IC PHONT REFLECTOR NJL5165K-B(H1)	
R952	1-249-420-11	CARBON	1.8K 5% 1/4W			< RESISTOR >	
R953	1-249-422-11	CARBON	2.7K 5% 1/4W	R81	1-249-414-11	CARBON	560 5% 1/4W
				R82	1-247-818-11	CARBON	300 5% 1/4W
			< VARIABLE RESISTOR >	R83	1-247-834-11	CARBON	1.3K 5% 1/4W
RV901	1-223-616-11	RES, VAR, CARBON 5K/5K(BALANCE)		R84	1-249-417-11	CARBON	1K 5% 1/4W
RV902	1-223-617-11	RES, VAR, CARBON 5K/5K(REC LEVEL)		R85	1-249-408-11	CARBON	180 5% 1/4W
			< SWITCH >				< SWITCH >
S911	1-554-303-21	SWITCH, TACTILE(■CLEAR)(DECK-A)		S81	1-571-958-11	SWITCH, PUSH (1 KEY)(STOP DET)	
S912	1-554-303-21	SWITCH, TACTILE(■PAUSE)(DECK-A)		S82	1-571-281-21	SWITCH, LEAF(70 μ EQ DET)	
S913	1-554-303-21	SWITCH, TACTILE(▷/FRONT)(DECK-A)		S83	1-571-281-21	SWITCH, LEAF(METAL)	
S914	1-554-303-21	SWITCH, TACTILE(◁/BACK)(DECK-A)		S84	1-571-281-21	SWITCH, LEAF(ERASE PROOF SIDE A)	
S915	1-554-303-21	SWITCH, TACTILE(●REC MUTE)(DECK-A)		S85	1-571-281-21	SWITCH, LEAF(ERASE PROOF SIDE B)	
S916	1-554-303-21	SWITCH, TACTILE(◁◁◁AMS>)(DECK-B)		S86	1-571-281-21	SWITCH, LEAF(HALF)	
S917	1-554-303-21	SWITCH, TACTILE(<AMS>▷▷)(DECK-B)					*****
S918	1-554-303-21	SWITCH, TACTILE(●REC)(DECK-B)					MISCELLANEOUS
S921	1-554-303-21	SWITCH, TACTILE(■CLEAR)(DECK-B)					*****
S922	1-554-303-21	SWITCH, TACTILE(■PAUSE)(DECK-B)		△5	1-551-188-XX	CORD, POWER(E)	
S923	1-554-303-21	SWITCH, TACTILE(▷/FRONT)(DECK-B)		△5	1-558-945-21	CORD, POWER (POLAR. SPT-1) (WR801ES)	
S924	1-554-303-21	SWITCH, TACTILE(◁/BACK)(DECK-B)		△5	1-575-651-21	CORD, POWER(AEP, German)	
S925	1-554-303-21	SWITCH, TACTILE(●REC MUTE)(DECK-B)		△5	1-696-845-11	CORD, POWER(AUS)	
S926	1-554-303-21	SWITCH, TACTILE(◁◁◁AMS>)(DECK-A)		△6	1-569-007-11	ADAPTER, CONVERSION 2P(E)	
S927	1-554-303-21	SWITCH, TACTILE(<AMS>▷▷)(DECK-A)					
S928	1-554-303-21	SWITCH, TACTILE(●REC)(DECK-A)		16	1-575-849-11	WIRE, FLAT TYPE (9 CORE)	
S931	1-554-303-21	SWITCH, TACTILE(COUNTER A RESET)		63	1-590-209-21	WIRE (FLAT TYPE) (7 CORE)	
S932	1-554-303-21	SWITCH, TACTILE(COUNTER A MEMORY)		67	1-765-406-11	WIRE (FLAT TYPE) (37 CORE)	
S933	1-554-303-21	SWITCH, TACTILE(DECK-A)		68	1-590-963-11	WIRE (FLAT TYPE) (7 CORE)	
S934	1-554-303-21	SWITCH, TACTILE(DECK-B)		70	1-690-420-11	WIRE, FLAT TYPE (7 CORE)	
S941	1-554-303-21	SWITCH, TACTILE(DUBBING MODE HIGH/NORM)					
		(START<DECK-B■>)					
S942	1-554-303-21	SWITCH, TACTILE(A+B REC)					
		(START<DECK-B■>)					
S943	1-554-303-21	SWITCH, TACTILE(COUNTER B RESET)					
S944	1-554-303-21	SWITCH, TACTILE(COUNTER B MEMORY)					
S951	1-554-303-21	SWITCH, TACTILE(RMS/START)					
S952	1-554-303-21	SWITCH, TACTILE(SET)					
S953	1-554-303-21	SWITCH, TACTILE(CHECK)					
S954	1-554-303-21	SWITCH, TACTILE(DISPLAY)					
			< FILTER >				
VFD901	1-517-263-11	INDICATOR TUBE, FLUORESCENT					

The components identified by mark  or dotted line with mark  are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
△T801	1-426-910-11	TRANSFORMER, POWER(E)					
△VS801	1-692-155-11	SELECTOR, POWER VOLTAGE (VOLTAGE SELECTOR) (E)					

ACCESSORIES & PACKING MATERIALS							

	1-558-271-11	CORD, CONNECTION		#1	7-682-548-09	SCREW +BVTT 3X8 (S)	
	1-558-271-11	CORD, CONNECTION		#2	7-682-547-09	SCREW +BVTT 3X6 (S)	
	1-558-271-11	CORD, CONNECTION		#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
*	3-376-446-01	CUSHION		#4	7-621-849-00	SCREW (BV/RING)	
*	3-388-322-51	INDIVIDUAL CARTON(WR745S)		#5	7-621-773-95	SCREW +BVTT 2, 6X6 (S)	
*	3-388-322-91	INDIVIDUAL CARTON(WR801ES)		#6	7-685-134-19	SCREW (+ PTPWH) (2. 6X8)	
	3-755-288-11	MANUAL, INSTRUCTION (RM-J903) (ENGLISH/FRENCH) (Canadian)		#8	7-627-556-08	SCREW +P 2. 6X2. 8	
	3-758-386-11	MANUAL, INSTRUCTION(ENGLISH/FRENCH/ SPANISH/PORTUGESE) (AEP, E)		#9	7-621-775-00	SCREW +B 2. 6X3	
	3-758-386-21	MANUAL, INSTRUCTION(ENGLISH) (WR745S:AUS, WR801BS)					
	3-758-386-31	MANUAL, INSTRUCTION(FRENCH) (Canadian)					
	3-758-386-41	MANUAL, INSTRUCTION(GERMAN/DUTCH/ SWEDISH/ITALIAN) (AEP)					
	3-758-386-51	MANUAL, INSTRUCTION(GERMAN) (German)					
	1-465-738-11	REMOTE COMMANDER(RM-J903) (Canadian)					
	2-181-754-21	COVER, BATTERY(for RM-J903) (Canadian)					

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

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Ne les remplacer que par une pièce portant le numéro spécifié.

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Consumer A&V Products Company
Home A&V Products Div.

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